









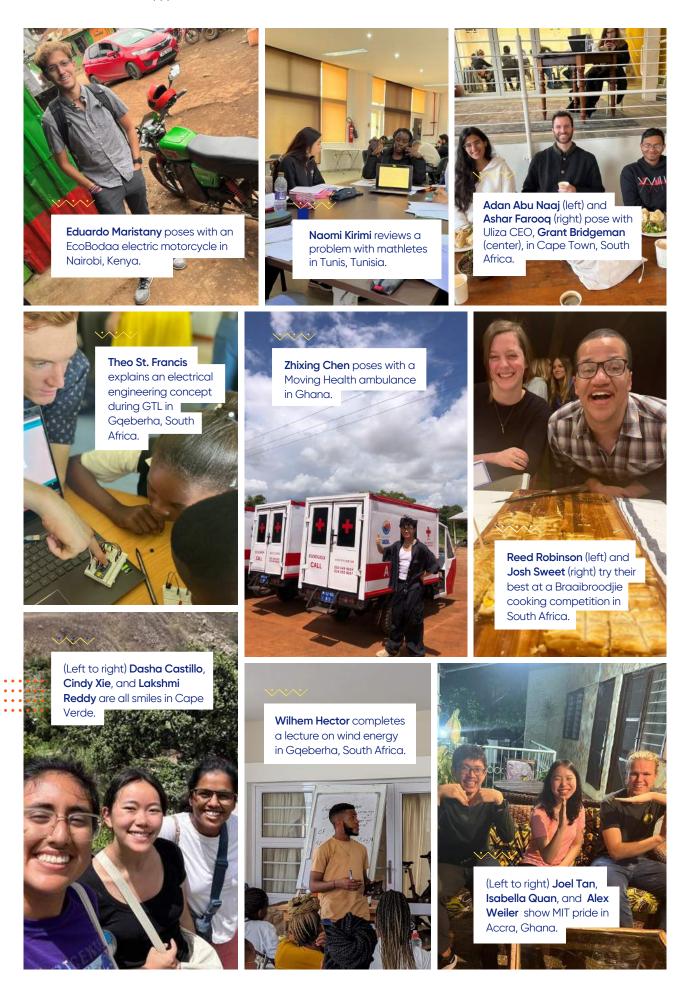


great ideas change the world MIT SCHOOL OF HUMANITIES ARTS AND SOCIAL SCIENCES



### STUDENTS IN ACTION 🖌

No/-----





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For the first time since 2019, this year marked a return to our activities without COVID restrictions. Overall, we placed 81 students into different opportunities, doubling placements from the previous year. The level of commitment and expertise our students brought to their work was a joy to witness.



R. HAI HASSAN Faculty Director

The MIT-Africa Global Teaching Labs program this year was our largest ever, offering STEM education opportunities for **300 young learners** across the African continent. We continued to focus on our work with African Mathematics Olympiad Teams, but also offered labs in computer science and artificial intelligence, robotics, mechanical engineering, sustainability, and design. MIT-Africa's crucial relationship with the Office of Vice Provost for International Activities continued this year as we jointly launched the first ever MIT-Africa Seed Fund, which provided funding for MIT faculty to engage research and teaching opportunities with colleagues in 5 different countries.

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With the Vice Provost's support, we also continued to place research interns at African universities in 7 different countries, solidifying joint knowledge production as a cornerstone feature of MIT's engagements in Africa.

As always, we are grateful to our supporters and collaborators that make everything at MIT-Africa possible, and especially our anonymous supporter who inspires us with their generosity year after year.



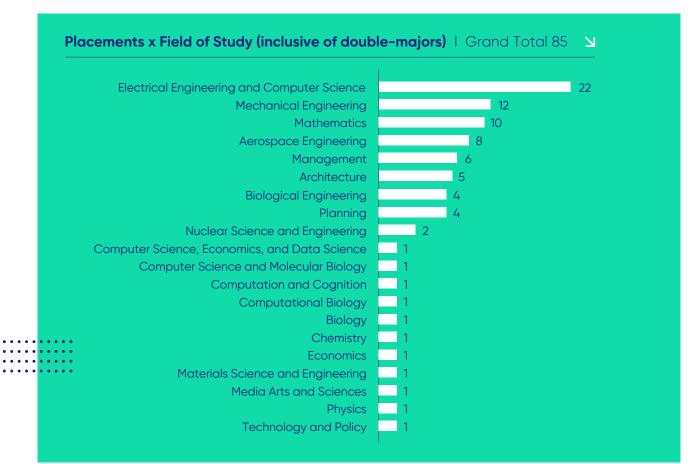
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#### Placements x Country | Grand Total 81

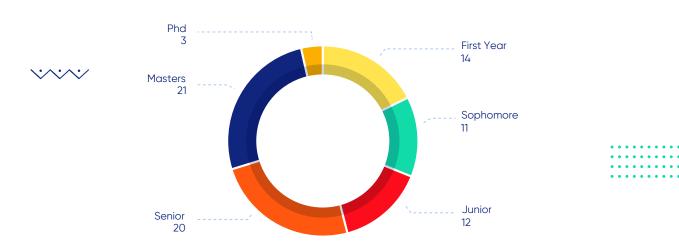


Dual Country GTL program with South Africa





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#### Placements x Level at Time of Placement | Grand Total 81



#### Placements x Impact Area | Grand Total 45



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Global Teaching Labs, or GTL, provides MIT students with the opportunity to "**learn by teaching**" while simultaneously introducing high school students abroad to MIT's signature lab-based approach to learning. **Running every January for 2 to 4 weeks**, GTL participants travel as teams to African countries to teach science, technology, engineering, and math (STEM) courses to high school students. During **IAP of 2023**, we ran the following labs:

Country	City	Theme/Focus	No. MIT Students	Partner	Approx. No. of Partner Students
Ghana	Accra	Competition Mathematics	3	MISE Foundation	20
Ivory Coast	Abidjan	Competition Mathematics	2	Société Mathématique de Côte d'Ivoire	10
Могоссо	Casablanca & Rabat	Robotics	3	International Education Group	50
	Agadir & Ben Guerir	Various Engineering, Design	4	Connect Institute	17
South Africa & Botswana	Johannesburg & Gaborone	Robotics and AI	9	Independent Schools Association of Southern Africa	150
South Africa	Gqeberha	Engineering Renewable Energy	5	Masinyusane	20
	Stellenbosch	Competition Mathematics	3	University of Stellenbosch	10
Tunisia	Tunis	Competition Mathematics	4	Mediterranean Institute of Mathematical Sciences	20

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All the teachers and learners during the **AI and Robotics GTL** in Johannesburg, South Africa.







## INTERNSHIP SPOTLIGHT

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BS in Planning (Course 11)

Host: **Jean Piaget University with Prof. Raffaella Gozzelino** Location: Praia, Cape Verde

This summer I had the opportunity to conduct research at Jean Piaget University in Praia, Cabo Verde on climate change and human health.

I worked with **a team of several collaborators to design** and conduct a community survey on these topics.

Outside of work, I enjoyed the opportunity to form connections with locals and explore Cape Verdean food, music, and more. Through the wide-ranging discussions I had inside and outside of work, I learned so much about politics and culture in different countries. The global perspective I gained through this experience will be valuable as I move forward in my academic and professional journey.

Cindy was also selected as **MISTI Identity X Ambassador**, sharing her experiences and perspectives through the lens of identity. Her blogposts can be read **here**.



### ANKITA DEVASIA

BS in Business Analytics (Course 15), **Class of 2023** 



#### Host: **Data Prophet** Location: Cape Town, South Africa

I worked on the **Data Science team** and was staffed on a project for a tire manufacturer. Over the first three months of my internship,

I implemented transfer learning algorithms that helped generalize my client's tire productions, reducing emissions and lowering scrap rates. MISTI is a life-changing experience.

Being able to fully embrace the city you travel to will undoubtedly shape you into a more resourceful and aware person. Although I had a lot of uncertainty about my future post-graduation, **my experience in Cape Town has helped inform my career goals** and enable me to leave my comfort zone in ways I couldn't have imagined.







### LEONARD VIBBI

MAS in Media Arts and Sciences (Course MAS) Class of 2024



Host: African Center for Technology Studies as part of the Government Innovation Research Fellowship

Location: Nairobi, Kenya

I interviewed governance actors in the Kenya Commission on Revenue Allocation (CRA) about the Kenya Revenue Devolution Model, specifically focusing on the third revenue sharing basis. It was revealing both interpersonally and professionally.

I benefited from **peer mentorship and improved my interpersonal skills**. I learned about my passion for solving governance innovation problems in developing countries.





### BS in Finance (Course 15), Class of 2024



### Host: **Knife Capital** Location: Cape Town, South Africa

I worked as an investment analyst. I did a variety of projects, using researching different aspects of an industry (competitors, potential exits, etc.).

I also worked on a project with the other interns that gave a general view of some of the strong and weak points in the portfolio. Speaking as a participant, I will say that this is one of the coolest experiences I have ever had the joy of participating in and I could not have done it without serious financial support.

I can safely speak for all MISTI participants when I say that we appreciate every cent that is donated to the program.







### ISABELLA GANDARA

BS in Biological Engineering (Course 20), **Class of 2025** 



Host: Medical Research Council Unit-The Gambia at the London School of Hygiene & Tropical Medicine Location: Banjul, The Gambia

the Nutrition worked in department with a focus on epigenetic impacts of nutrition. The team I worked with is interested in exploring environmentally sensitive areas of the epigenome to inform medical interventions and understand how malnutrition in early life affects health outcomes throughout life.

I was always interested in global health, but this experience has really strengthened my passion for a career in research that seeks to increase representation and impact for people in the "**Global South**."

It was really important to see first-hand the kind of challenges of research in low-resource settings and is something I would like to work through in my career.



### NATALIE PETROSSIAN

MBA (Course 15), Class of 2023

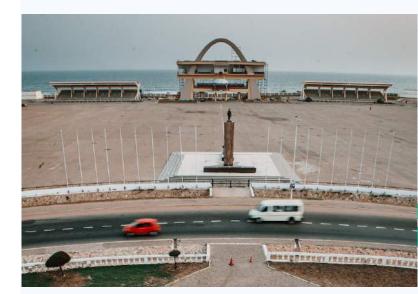


Host: **Yemaachi Biotechnology** Location: Accra, Ghana

It was an amazing experience. Biotech is supposed to be inclusive as the whole point of the industry is to develop medicines to advance human health.

And yet, medicine is inherently divisive due to a severe lack of diversity in patient representation and in genetic information for research and drug discovery.

I'm so lucky that I got to have a small part in the **solution to this challenge**.









### HYUN 5U PRICE

BS in Artificial Intelligence and Decision Making (Course 6), **Class of 2026** 



Host: **Aerobotics** Location: Cape Town, South Africa

I worked to develop and implement terrain following for the drones they use. Essentially, creating software that allows the drones to follow the changes in the ground elevation as it flies.

Programs like **MISTI are incredible as they open up global opportunities** for anyone, regardless of their financial situation.

It's also just amazing to be able to go, live, and work in a whole new country.





### Jacqueline Baidoo

PhD Candidate in Materials Science and Engineering (Course 3)



Host: **Sanergy Collaborative** Location: Nairobi, Kenya

I spent the summer with the Sanergy Collaborative exploring the feasibility of making biochar to add to their product line. Through it, I got on the ground insight into some of the parts that make waste moving valorization tick and how developing cities navigate the challenge of supporting urbanization and growth without falling into the structural pitfalls that take us further away from reaching global sustainable development goals. It was incredible to see local leaders devising and revising the new blueprints for how we consider materials at their end-of-life, and getting to see it in person inspired so many ideas on how I can incorporate this in my research in ways I hadn't even considered through literature alone. Beyond thesis work, I also enjoyed seeing the African continent from a new perspective and learning more of what's unique about my own West African heritage through cultural similarities and differences with people who look the same but have been shaped by different histories.







### ASHAR FAROOQ

BS in Computer Science and Engineering (Course 6) **Class of 2023** 



### Host: **JUliza**

Location: Cape Town, South Africa

I did 3 separate large tasks: 1) I worked on creating new machine learning models of different architectures to detect the language of an audio by using spectrograms, 2) I worked on writing scripts to take PDF formats of interviews and converting them to CSV/XML to Subtitles formats, and 3) I worked on creating a basic test for fine tuning a large language model. The PDF work is directly being used by the startup in their project to preserve a local language. The basic large language model test is being worked on to determine feasibility.

It is so lovely to have these opportunities to experience things beyond one's comfort zone without having to worry as much about finances and logistics, thus the opportunities are extremely valuable.





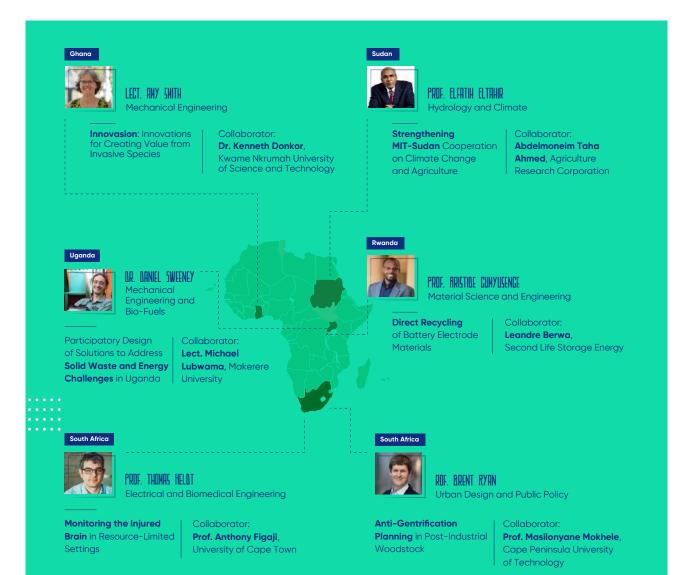




In 2022, MIT-Africa partnered with the **Office of the Vice Provost for International Activities** to launch MIT's first Africa focused research seed fund. The investment from Vice Provost Richard Lester sent a clear message that MIT is seeking research collaborators in Africa's knowledge centers, and in so doing, advances scholarship bi-directionally.

The response from the MIT community was incredible – MIT-Africa received 14 applications and awarded six grants covering five different countries for a total of over **\$170,000 in awarded funds in 2022 cycle.** 

The six awardees were:





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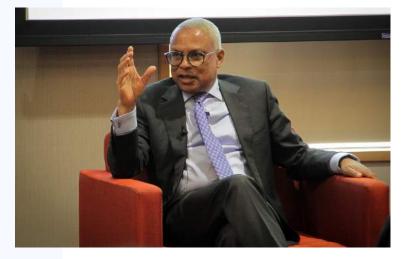
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# EVENTS AND INITIATIVES SPOTLIGHT

### Hosting Cape Verdean President, **Hon. José Maria Neves**

In **April 2023**, MIT had the honor of hosting President Neves for a public conversation on E-Governance in Africa, an area in which Cape Verde, and President Neves, has provided exemplary leadership. The event was featured as part of MIT's ongoing **Center for International Studies x True Africa University** lecture series. The MIT News story about his visit is available **here**.

Several months later, in June 2023, MIT students, MIT-Africa Managing Director and program advisers returned the favor and visited President Neves at his office in Praia, Cape Verde.





(Left to right) Lakshmi Reddy, Cindy Xie, Prof. Raffaela Gozzelino (JPU), President Neves, Dasha Castillo, Ari Jacobovits, and Prof. Joao Resende (Bentley University).









### **Bridging Research and Innovation (BRAIN)** Program with Open Startup International.

What began as an experimental program in 2020 to train Tunisian PhD holders in entrepreneurship, has evolved into a model for supporting deep tech entrepreneurship and research commercialization in low- and middle-income countries. Spearheaded by Executive MBA student Phil Rigueur as part of Dr. Phil Budden's IDEAL Lab course, Mr. Rigueur assembled a group of 7 impressive EMBA classmates to deliver a business training course for 20 aspiring Tunisian entrepreneurs in March of 2023.



Phil Rigueuer leading a session in Tunis, Tunisia as part of the BRAIN program.

At MIT, this program was launched by MIT-Africa in 2020 and continued with the support the Legatum Center and the Sloan EMBA Program.

### Government Innovation Research Fellowship.

In partnership with **MIT GOV/LAB, and the Priscilla King Gray Public Service Center**, several MISTI programs launched this first of its kind fellowship to document public sector innovation success stories across the "**Global South.**" In the Africa region, three graduate students were selected – one for Cape Verde, and two for Kenya – as fellows. As a fellow, students researched and co-developed case studies that can be used by bureaucrats, civil society organizations, academics, and other innovation actors to



Deepika Raman (second from left) and Leonard Vibbi (third from left) pictured with ACTS Executive Director Dr. Tom Ogada (left) and other members of the ACTS leadership team.

strengthen democratic governance transparency, responsiveness and accountability in the "Global South." **An MIT News story** about this initiative is available **here**.





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Our work would not be possible without the support of these great organizations and people:





# **HCKNOWLEDGEHENTS**

#### At MIT

Prof. Richard Lester, Vice Provost of International Activities Elizabeth Dupuy, Global MIT April Julich Perez, Center for International Studies John Congdon, Center for International Studies Robert Chambers, Center for International Studies Amanda Soh, Center for International Studies Isabelle Bitman, Center for International Studies Prof. Evan Lieberman, Center for International Studies Griselda Gomez, Center for International Studies Prof. Michel Goemans, Mathematics Prof. Yufei Zhao, Mathematics Andree Lee Dixon, Mathematics Chris "Petey" Peterson, Admissions Stu Schmill, Admissions Dr. Phil Budden, Sloan Dina Sherif, Sloan Luis Barros, Sloan Megan Hinkley, Resource Development Jennifer Butler, Resource Development Brenda Richard, Resource Development Joost Bonsen, Media Lab Prof. Wesley Harris, Aero Astro

Carlos Centeno, GOV LAB Seong Park, GOV LAB Members of the MIT Africa Business Club Members of the MIT African Students Association

#### Alumni and Friends Around the World

Adjoa Poku ('06) Araba Lamousé-Smith ('00) Ato Ulzen-Appiah ('06) Darrell Swanson ('09) David Ogutu ('15) Diego Guerrero Cardenas ('16) Emily Young ('18) Guillaume Amblard ('87, '89) Hassan Kane ('17) Jose Esparza ('19) Martin Mbaya ('00) Ojonimi Ocholi Patricia Lubwama ('09) Sam Epee-Bounya ('03) Shaheer Hussam Victor Mallet ('06) Ziad Oueslati ('90)



Brendan J. Swords, Wellington Management Lebogang Montjane, ISASA Dr. Alexandra Epee-Bounya, BCH Jeremy Naidoo, St. Johns College Rod McDonald, St. Johns College Prof. João Resende, Bentley University Prof. Raffaella Gozzelino, Jian Piaget University Prof. Salome Maswime, University of Cape Town Dr. Houda Ghozzi, OSI Yesmine Mansar, OSI Mini Kouame, MassPRIM Jim McKeown, Masinyusane Zama Zulu, Masinyusane Dr. Jean-Philippe Bakassa, SMCI Amadou Sanankoua, OnPoint Africa Joel Dogoe, MISE Foundation Tebogo George, Maru-a-Pula Dr. Archana Patel, Zambia Teaching Hospital Prof. Masilo Mokhele, CPUT Prof. Ulrich Paquet, AIMS Dr. Kofi BimpongBota Grant Bridgeman, Uliza

### HIT-AFRICA TEAN

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### DR. HAI HASSAN

MIT-Africa

Associate Professor of Political Science Faculty Director,



HR. HRI JACOROVITS MIT-Africa Managing

Director

MIT Center for International Studies



Course

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# APPENDIX - ALL PLACEMENTS

#### $\sim\sim\sim\sim$

**Name** Adan Abu Naaj Elnag Alaina Kolli Alavo Oloka Alex Quach Alex Weiler Ally Moir Ankita Devasia Anna Duncan Ashar Farooq Ben Lammers Beth Tesfaye Bolurin Adepipe Brooke Bensche Celina Pasiecznik Charmaine Lee Christian Studebake Cindy Xie . Courage Kpodo Daniel Antov Dasha Castillo David Parkhurst Deepika Raman Diane Li Dila Ozberkman Eduardo Maristany Elaine Wana Eunice Aissi Evgenia Artemova Gustavo Ramirez Holden Mui Hyun Su Price Isabella Gandara Isabella Quan Jacqueline Baidoo Jared Boyer Joel Tan Josh Sweet Joshua Masuda Julia Pasiecznik Kaelyn Dunnell Katherine Ellisor Katherine Xiona Katie Kempff Kenneth Orango Kristen Palmer Lakshmi Ganaa reddvoalli Leonard Vibbi Lesley Lambaric Lilly Edwards Maanasa Kotha Maanasi Limaye Masarah Ahmedhussain Maxwell Onyango Minji Kim , Naomi Kirimi Natalie Petrossian Omar Dahleh Peter Miedaner Reed Robinson Renee Leatherman Rose Bialek Sabrina Hare Sandy Jean-Charles Serena An Seth Fine Shaida Nishat Shanti Mickens Shealy Callahan Shreya Pandit Sienna Williams Sophie Longawa Subhash Kantamneni Sydney Dell Sylas Horowitz Theo St. Francis Tiffany Louie Wilhem Hector Yilinn Yang Yuka Machino Zhixing Chen Zoe Fisher

Electrical Engineering and Computer Science Electrical Engineering and Computer Science Mechanical Engineering Electrical Engineering and Computer Science Mathematics Management Electrical Engineering and Computer Science Mechanical Engineering Computer Science, Economics, and Data Science Aerospace Engineering Planning Architecture Aerospace Engineering Aerospace Engineering Management Architecture Planning Architecture **Biological Engineering** Electrical Engineering and Computer Science Architecture Technology and Policy Mechanical Engineering Architecture Leaders of Global Operations Electrical Engineering and Computer Science Mechanical Engineering Mathematics with Computer Science Computation and Cognition Mathematics Mathematics with Computer Science Biological Engineering Mathematics with Computer Science Materials Science and Engineering Aerospace Engineering Mathematics with Computer Science Management Electrical Engineering and Computer Science, Business Analytics Aerospace Engineering Nuclear Science and Engineering Economics Electrical Engineering and Computer Science Aerospace Engineering Mechanical Engineering Electrical Engineering and Computer Science Planning Media Arts and Sciences Electrical Engineering and Computer Science Computer Science and Molecular Biology Electrical Engineering and Computer Science Biological Engineering Electrical Engineering and Computer Science Electrical Engineering and Computer Science Planning Electrical Engineering and Computer Science Management Electrical Engineering and Computer Science Chemistry Biological Engineering Management Mathematics Mechanical Engineering Electrical Engineering and Computer Science Mathematics Mathematics, Electrical Engineering and Computer Science Biology Electrical Engineering and Computer Science Mechanical Engineering Electrical Engineering and Computer Science Aerospace Engineering Mechanical Engineering Physics, Electrical Engineering and Computer Science Computational Biology Mechanical Engineering Aerospace Engineering Electrical Engineering and Computer Science Mechanical Engineering Electrical Engineering and Computer Science Mathematics Mechanical Engineering Nuclear Science and Engineering

Level	Host
1	Uliza
1	Data Prophet
2	IEG Education
4	ISASA
4 M	MISE Foundation
4	Renewvia Data Prophet
2	Connect Institute
4	Uliza
1	Calestous Juma Legacy Found.
м	IUGET
M	African Center for Tech. Studies
4 M	ISASA SMCI
M	ISASA
M	IUGET
3	Jean Piaget University
м	Uni. Dar Es Salaam
2	Msanzi Meat
4	Fundacao Smart Cities
M	IUGET
M 4	African Center for Tech. Studies Medine
2	SAOTA
M	EcoBodaa
1	City of Cape Town
PhD	Catalyst Energy
3	MIMS
3	ISASA
2	MIMS
1 2	Aerobotics MRC Unit, LSHTM
1	MISE Foundation
PhD	Sanergy
4	IEG Education
1	MISE Foundation
3	Knife Capital
3	Masinyusane
м	SMCI
2	Masinyusane MIMS
M	Connect Institute
1	Aerobotics
1	Medine
4	ISASA
м	NOSi
M	African Center for Tech. Studies
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1	Uni. Cape Town
3	Sanergy
1	Calestous Juma Legacy Found.
м	UN Habitat
4	MIMS
M 3	Yemaachi ISASA
PhD	Connect Institute
4	Uni. Cape Town
м	mDoc
4	MycoHAB
4	Response Innovation Lab
м	Formula D
1	Uni. Stellenbosch Uni. Stellenbosch
4	Uni. Zambia Hospital
3	ISASA
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City	Country	Туре
Cape Town	South Africa	Private Sector
Cape Town	South Africa	Private Sector
Casablanca	Morocco	GTL GTL
Accra	e South Africa and Botswana Ghana	GTL
Nairobi	Kenya	Private Sector
Cape Town	South Africa	Private Sector
Agadir	Morocco	GTL
Cape Town	South Africa	Private Sector
Bunyala	Kenya	Nonproft/NGO
Duoala Nairobi	Cameroon Kenya	Academia/Res Academia/Res
	e South Africa and Botswana	GTL
Abidjan	Ivory Coast	GTL
Johannesburg/Gaboron	e South Africa and Botswana	GTL
Duoala	Cameroon	Academia/Res
Praia	Cape Verde	Academia/Res
Dar es Salaam Cape Town	Tanzania South Africa	Academia/Res Private Sector
Praia	Cape Verde	Private Sector
Duoala	Cameroon	Academia/Res
Nairobi	Kenya	Academia/Res
Medine	Mauritius	Private Sector
Cape Town	South Africa	Private Sector
Nairobi	Kenya Rooth Million	Private Sector
Cape Town Cape Town	South Africa South Africa	Public Sector/I Private Sector
Tunis	Tunisia	GTL
	e South Africa and Botswana	GTL
Tunis	Tunisia	GTL
Cape Town	South Africa	Private Sector
Banjul	The Gambia	Academia/Res
Accra Nairobi	Ghana	GTL Private Sector
Casablanca	Kenya Morocco	GTL
Accra	Ghana	GTL
Cape Town	South Africa	Private Sector
Gqeberha	South Africa	GTL
Abidjan	Ivory Coast	GTL
Gqeberha Tunis	South Africa Tunisia	GTL GTL
Agadir	Morocco	GTL
Cape Town	South Africa	Private Sector
Medine	Mauritius	Private Sector
	e South Africa and Botswana	GTL
Praia	Cape Verde	Public Sector/I
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Medine	Mauritius	Private Sector
Cape Town	South Africa	Academia/Res
Nairobi	Kenya	Private Sector
Bunyala	Kenya	Nonproft/NGO
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Tunis Accra	Ghana	GTL Private Sector
	e South Africa and Botswana	GTL
Agadir	Morocco	GTL
Cape Town	South Africa	Academia/Res
Accra	Ghana	Private Sector
Windhoek	Namibia	Private Sector
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Chipata	Zambia	Academia/Res
	e South Africa and Botswana	GTL
Windhoek	Namibia	Private Sector
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Cape Town Agadir	South Africa Morocco	Academia/Res GTL
-	e South Africa and Botswana	GTL
Casablanca	Morocco	GTL
Gqeberha	South Africa	GTL
Gqeberha	South Africa	GTL
	e South Africa and Botswana	GTL
Gqeberha Capo Town	South Africa South Africa	GTL Nonproft/NCC
Cape Town Cape Town	South Africa	Nonproft/NGC GTL
Accra	Ghana	Nonproft/NGC
Medine	Mauritius	Private Sector

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#### Supporting the MIT-Africa Program

Support for our work comes in all shapes sizes, but no matter how big or how small, it's always meaningful. Types of support often include: All contributions should be directed to <u>MIT-AFRICA</u> <u>Program, MISTI</u> – Account #3892550



Learn more misti.mit.edu

#### $\sim\sim\sim\sim$

- Hosting an MIT student intern(s) at your Africa-based company, research lab, school, or other type of organization.
- Attending program-organized events online or in-person.
- Connecting with students while they are in-country (ideally, when you are there too) and facilitating their integration into local life.
- Connecting with students before they depart to a country in which you are familiar to offer advice on cultural nuances, in-country activities, or in-country contacts.
- Sharing this report with anyone that may be interested in learning about our work.
- Making a financial or in-kind (relevant to those hosting students) contribution to the program. There are various way to give to the program, which are detailed here or by scanning here:s.