

océane boulais

creative hacker
conservationist
activist
human technologist

oceane@mit.edu
+1 (561) 396 7521
www.boulais.io

EDUCATION

M.S Media Arts and Sciences, Massachusetts Institute of Technology // 2018 - 2020

B.S. Electrical Engineering, Florida Atlantic University // 2013 - 2018 // GPA: 3.71

Study Abroad, The GREEN Program, University of Reykjavik // 2015

Yoga Alliance Certified Yoga Teacher, Anahata Yoga Shala // 2018

Languages: French, English

RESEARCH

Viral Communications Research Group // 2018 – present

- **CivicLink** // fall 2018 – present // What began as a course project for Viral Political Action, has now blossomed into a decentralized internet project that aims to serve communities in their efforts to own their data (events, forums, collaborative efforts etc). CivicLink will be a community-centric server hosted by a community delegate. Users will be able to log into their CivicLink's and discuss events and issues undistracted by the noise outside what the community cares about.
- **Token Quality Based on Source Code** // fall 2018 – present // In collaboration with the Monetary Authority of Singapore, this project aims to deliver a series of Github-signal based metrics that would be both useful to the layman and investor alike in order to help see past the rocky trends of the cryptocurrency market to the actual viability of the token as a utility or security.
- **Exploring Provenance of Pacific Island Tuna using Distributed Ledger Technology (DLT)** // Jan 2019 – present // The application of DLT for the opaque supply chains of Pacific Island tuna is investigated, specifically those that are correlated with violating conservation and social responsibility efforts. DLT holds the potential to make the tuna fishery supply chain more transparent, auditable and traceable, allowing consumers to refuse illegal, unreported, unregulated (IUU) fish. [Updated work.](#)

Undergraduate Student Researcher, Florida Atlantic University College of Engineering and Computer Science // 2013 – 2015

- *Improvement of wastewater management in South Florida*, Environmental Solutions Lab, Dr. Meeroff (Jan '14 – Jan '15)
- *Exploration of Ferrofluid Globule Explosion in Sodium Sterate* Mechanical and Ocean Engineering Dept, Dr. Zu (Aug '13 – Mar '14)

Research Fellow, Pratt School of Electrical Engineering, Duke University // summer 2015

- Explored the opportunities in RIR-MAPLE (Resonance infrared matrix-assisted pulsed laser

evaporation) to build hybrid organic-inorganic solar fuel cells.

PROFESSIONAL EXPERIENCE

Hardware Engineering Intern, Facebook // summer 2017

- Project lead on the characterization and testing of the reliability that comprise key data center server components
- Designed and built a mechanical pneumatic fixture for testing cycles
- Fabricated the testing scripts for polling, logging and parsing data from each testing cycle

Developmental Operations Engineering Intern, NBCUniversal // summer 2016

NBCUniversal MediaTech Fellow '16

- Within technology infrastructure development, concentrated identifying key bottleneck parameters within DevOp production flow
- Generated optimization algorithms for git repository flow while collaborating with DevOps engineers
- Laid out a GUI platform for visualization of git repository flow

Operations Engineering Intern, BlueNRGY LLC // spring 2015

- Analyzed data entries delivered from a variety of renewable energy power plants, which included the monitoring of Lone Valley Solar Park, a 30 MW solar plant located in Lucerne Valley, CA.

STEAM Engineering Mentor, Broward County Public Schools // 2015 - 2016

- Collaborated with K-5th grade Elementary School teachers to infuse engineering concepts into currently installed curricula.
- Helped execute technical engineering projects for K-5th grade to reinforce curricula learned in the classroom.

PROJECTS & HACKATHONS

Decentralized #ArtProject // Lead Technologist // 2018 – present

- A decentralized community was born after the necessity to interact with people from different fields to explore the convergence between art and blockchain, enabling unexpected connections that result in prosperous collaborations.
We have hosted several workshops at hackathons for the Ethereum Global conferences since the naissance of the project in 2018, where artists and technologists have since had a place to meet and collaborate. <http://artproject.io/>

AutoJello: Intern Hackathon, Facebook // 2017

- Using python scripts to access any desktop computer's front-camera, to detect movement, AutoJello posts to your Facebook feed after 1hr of no movement detected.

Camp Hackathona, Facebook // 2017

- Adding augmentation to real world surfaces

Escape Room Puzzle // 2017

- Collaborated with start-up Warden Inc. to design and prototype a puzzle prop for an escape room company in West Palm Beach, FL.
- The puzzle consisted of dials that needed to be aligned in a certain configuration to access the next puzzle.
- Used ESP8266 (for logging), Arduino Uno and 3 hall effect sensors

Digital Currency Initiative Bootcamp, MIT Media Lab // 2016

- Explored the fundamentals of cryptography such as elliptic curves and Merkle trees.
- Participated in hands-on labs deconstructing transactions and building mining devices.
- Selected to attend the Scaling Bitcoin Conference in Milan, Italy (10/6/2016-10/8/2016)

TheFloorIsLava, Microsoft Holohack // 2016

- 48hr hackathon where we used Unity to develop a spatial mapping game for HoloLens.
- Collaborated with Microsoft developers when implementing spatial sound and orientation.

Facebook Messenger Chatbot // 2016

- Utilizing python and Django/Ngrok as a backend server, the project is an entertainment-orientated Messenger Bot to propose to MediaLabs at NBCUniversal.

HONORS & AWARDS

Elements Fellowship (2019)

- A fellowship that funds projects focused on the core themes of climate, the democratization of science, and the inclusion of indigenous voices in the stewardship of land, water and human exploration.

Congressional Visit Day Fellowship (2019)

- A fellowship that enables selected students to represent MIT through the Science Policy Initiative at Congress in March
- Conversations between students and state Representatives and Senators at Congress occur to advocate for federal science funding and policy

MIT Action Sustainability Corps Fellowship, Inaugural Cohort (2019)

- A way to integrate sustainability projects and efforts outside the classroom and into the world
- A selected cohort of individuals whom learn from a network of people that help them navigate the sustainability ecosystem both within and outside of MIT
- The cohort is provided funding to support their search, such as attending or participating in conferences and/or networking events

Student Talon Award (2017)

- Given to a single selected student from the entire FAU student body annually
- Established in 1997, the award unites alumni, students, campus and community leaders in a celebration of leadership, support and service to FAU.

IEEE Power and Energy Society Plus Initiative Scholar (2014 -16)

- A competitive scholarship program offered to a select 185 applicants from all of US and Canada
- IEEE Power and Energy Society Schweitzer Meritorious Scholar (An additional merit-based recognition for a select 20 applicants out of the 185 scholarship recipients)

PUBLICATIONS & PRESENTATIONS

Boulais, O., Solano J., Solano A., Torres M., & Ramirez J.(2015). Students Developing as Leaders and Global Professional Engineers. (Published in LACCEI/IEEE-RITA Research Paper)

Boulais, O. (2015). Integrating Art with STEM Education. TEDxBoca Raton - (<https://youtu.be/DjpWQkmopgY>)

Boulais, O. & Torres M. (2015). Applied Electronics Bootcamp: The Enhancement of Electrical Engineering Curriculum Through Student-Directed Learning Programs. Poster presented at 2015 FAU Undergraduate Research Symposium, Boca Raton, FL.

Boulais, O. (2015). Materials and Device Characterization of Organic Solar Cells Deposited by Resonant-Infrared Matrix-Assisted Pulsed Laser Evaporation. Presented at SHPE 2015.

Boulais, O. (2015). Society of Hispanic Professional Engineers RISE Symposium Finalist

Boulais, O. (2014). Leader and Global Professional Engineer Competences and Development in our Students. (Published in IEEE-RITA LACCEI 2014; ISSN :1932-8540)

Boulais, O. (2014). Exploration of Ferrofluid Globule Explosion in Sodium Sterate. Poster presented at Florida Undergraduate Research Symposium, Location.

RELEVANT COURSEWORK

Applied Cryptography // C for Engineers // Foundations of C++ // Circuits I&II // Electronics I&II // Electromagnetic Fields & Waves // Hydroelectric Systems // Geothermal Energy // Biofuel Systems

TECHNICAL SKILLS

AutoCAD // Inventor // SolidWorks // MATLAB // C, C++, Python, ReactJS, HTML, CSS, Go, OpenFrameworks // Microsoft Visual Studio // Adobe Suite: Illustrator, Photoshop // Django // Ngrok

LEADERSHIP

Accessing Resources at MIT (ARM) Coalition Graduate Representative (Dec '18 – Present)

Member of the MIT Action Sustainability Corps (March '19 – Present)

Eastgate Co-President and Graduate Student Council Representative (Feb '19 – Present)

University Visiting Committee Representative, Media Lab (Fall 2018)

Media Lab Gets Outside (MLGO) Founder (Dec '18 – Present), a student run organization that applies for grants to fund trips for the Media Lab student community to partake in outside activities

MIT Bitcoin Expo Logistics Chair, MIT Bitcoin Club (Dec '18 – Mar 19')

CECS Student Representative, Technology Fee Committee, Distinguished Teacher of the Year Committee, and Sustainability Committee, FAU (Aug '15 – Jan '17)

Region 3 (Southeast Continental US) Student Representative, IEEE (Dec '14 – Jul '17)

Vice President, Engineering Student Council, FAU (Jan '14 – May '17)

Student Ambassador, Iceland GREEN Program (Aug '15 – Jan '17)