

BANTI GHENETI – banti@gheneti.com

Multicultural MIT-educated Robotics / AI Researcher, Data Systems Engineer and Civic Tech-er. I have facilitated and worked in teams making software and software/hardware systems from idea through deployment. I am seeking companies, nonprofits, and collectives that are values-centered, community-focused and equity-oriented.

LANGUAGES

General Python, Scala, C++, Matlab/Simulink, Java, Unix, ROS
Web Javascript, Google Cloud, Node.js, 11ty
Spoken English, Dutch, German, Afaan Oromoo, French

INTERESTS

Machine Perception Optimization
Project Planning System Design
Housing Justice Indie Music

EXPERIENCE

Pickle Robot Company - AI Team Lead

March 2020 - April 2021

Member of Technical staff

January 2020 - April 2021

Junior Member of Technical Staff

August 2019 - December 2019

- Facilitated the AI team, responsible for planning, derisking, executing and iterating on computer vision systems (LiDAR, RGB-D, barcode reader) and applied research projects for cobots and industrial robots
- Reduced task cycle time of an industrial robot by more than a second, with expanded segmentation capabilities
- Handled parcel variety and occlusions not serviceable with prior software, using a machine learning workflow (Tensorflow, data annotation platform, Google Cloud) in a deployed logistics setting

Directorate of Science, Technology and Innovation - Data Science Intern

February 2019 - July 2019

- Developed technical concept notes for the Government of Sierra Leone
- Architected an interactive GIS portal for government decision makers

Senseable City Lab at MIT - Graduate Research Assistant

September 2017 - February 2019

- Architected and implemented a software system for an autonomous boat in ROS
- Solved multi-robot planning problems with MIQP and SQP trajectory optimization
- Authored papers for top computer science conferences such as IEEE ICRA, IROS, and MRS
- Presented technical ideas to and orchestrated demos for existing and potential sponsors

SendFriend - Chief Technology Officer

January - December 2017

- Led an engineering team in building an MVP app (Ionic, Firebase) and integrating with partner APIs

Kayak - Analytics Software Engineering Intern

June - August 2017

- Wrote utilities in Scala to automate Apache Spark data pipeline ETL processes

NASA Jet Propulsion Lab - Mission Operations System Software Engineer

June - August 2016

- Designed and implemented a Twitter-bot system for generating automatic tweets from spacecraft telemetry
- Tested and evaluated the feasibility of using the ELK stack for managing data system logs

SELECTED PUBLICATIONS

- [1] B. Gheneti, S. Park, R. Kelly, D. Meyers, P. Leoni, C. Ratti, and D. Rus "Trajectory Planning for the Shapeshifting of Autonomous Surface Vessels," in *IEEE International Symposium on Multi-Robot and Multi-Agent Systems*, 2019.
- [2] W. Wang, B. Gheneti, L. A. Mateos, F. Duarte, C. Ratti, and D. Rus, "Roboat: An autonomous surface vehicle for urban waterways," in *2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2019, pp. 6340–6347.
- [3] L. A. Mateos, W. Wang, B. Gheneti, F. Duarte, C. Ratti, and D. Rus, "Autonomous Latching System for Robotic Boats," in *2019 International Conference on Robotics and Automation (ICRA)*, 2019, pp. 7933–7939.
- [4] W. Wang, L. A. Mateos, S. Park, P. Leoni, B. Gheneti, F. Duarte, C. Ratti, D. Rus, "Design, Modeling, and Nonlinear Model Predictive Tracking Control of a Novel Autonomous Surface Vehicle," in *2018 IEEE International Conference on Robotics and Automation (ICRA)*, 2018, pp. 6189–6196.

EDUCATION

Massachusetts Institute of Technology

Master of Engineering in Electrical Engineering and Computer Science

February 2019

Bachelor of Science in Electrical Engineering and Computer Science

June 2017

PROJECTS AND AWARDS

MIT Entrepreneur and Maker Skills Integrator (MEMSI)–Audience choice award

June 2018

- Led a team of students researching and prototyping a sustainability education product
- Visited and toured high-tech factories in the Pearl River Delta (China)

MIT IDE Hacking Our Digital Future – 1st place

January 2018

- Presented a concept for a human-centered platform for inclusive workers, skills, and careers matching
- Employed scenario modeling to understand career trajectories of diverse personas

Fredfest – Lead Organizer

March 2015 – 2017

- Negotiated agreements with musician talent agencies and equipment contractors for large annual concerts
- Coordinated with various MIT administrators to receive event funding and vet contractor forms