Evan Bosia

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Computer science graduate student with three years of robotics research and development experience.
Excels at finding intelligent solutions to difficult technical challenges.

SKILLS

Skills: robotics, object-oriented design, machine learning, machine vision, distributed systems
Languages: (advanced) Python; (proficient) Java, C#, C++, C, Go; (beginner) Javascript
Software: Git, Linux, OpenCV, Numpy, Pandas, Numba, Scikit-learn, TensorFlow, SQL, Flask

EXPERIENCE

R&D Engineer - Formulatrix 2017 - 2020

Responsible for R&D and support of the hardware and software of biotech automation instruments.

- Developed robotic "poking" tool to increase the production rate by 500% with C# and OpenCV (Emgu)
    - Set up a GUI using Windows Forms with XML configuration files for data persistence
- Created an algorithm using OpenCV to segment and measure thousands of samples in an image
- Prototyped QC tool combining OpenCV for feature extraction and Scikit-learn for machine learning
    - Built image scoring software using C# to generate labeled training data
- Implemented randomness scoring script to quantify and compare dPCR amplification quality
- Wrote log parsing script with Python and Pandas to assist in my instrument support responsibilities

EDUCATION

Boston University 2020 - 2021

Master of Science (M.S.) in Computer Science

- **Courses**: Distributed Systems, Image Computing, Object-Oriented Programming, Advanced Algorithms, Geometric Processing, User-Centric Computing, Machine Learning, Deep Learning

Worcester Polytechnic Institute 2013 - 2017

Bachelor of Science (B.S.) in Robotics Engineering and Mechanical Engineering

Rho Beta Epsilon (Robotics) Honor Society + Tau Beta Pi (Engineering) Honor Society

PROJECTS

Drawbot

- Prototyped different fill pattern generators using Numpy and Numba to convert images to gcode
- Optimized code for performance using object-oriented C++
- Set up Flask server on a raspberry pi to allow file uploads and control the robot over the network

National Hockey League Statistics

- Pulled hockey statistics into Pandas using Python Requests from the National Hockey League API
- Trained regression models using Scikit-learn for different statistics predictions

Boston University Projects

- **Distributed Systems:** Wrote linearizable distributed key-value store in Go following the RAFT algorithm
- **Object-Oriented:** Created a Java Swing banking app using object-oriented design patterns
- **Machine Learning:** Trained classifier using LightGBM on Netflix "Who Rated What?" dataset
- **Deep Learning:** Developed TensorFlow CNN to identify images with brain tumors with 99.7% accuracy