Ajay Benno

abenno@andrew.cmu.edu | github.com/AjayBenno | linkedin.com/in/AjayBenno

EDUCATION

CARNEGIE MELLON UNIVERSITY
B.S in Electrical and Computer Engineering
Expected May 2019 | Pittsburgh, PA
M.S in Electrical and Computer Engineering
Expected Fall 2019 | Pittsburgh, PA

METHACTON HIGH SCHOOL
Grad. May 2015 | Collegeville, PA

COURSEWORK

GRADUATE
- Database Systems
- Mobile Robot Algorithms Laboratory
- Policies of the Internet

UNDERGRADUATE
- Functional Programming
- Telecommunication Networks
- Database Systems
- Parallel and Sequential Data Structures
- Parallel Arch and Programming
- Electronic Devices and Analog Circuits
- Logic Design & Verification
- Signals and Systems

SKILLS

Python ▪ Java ▪ C/C++
Scala ▪ CircleCi ▪ Arduino
ROS▪ System Verilog ▪Unix/Linux
HTML/CSS ▪ Matlab ▪ H2O.ai

ORGANIZATIONS

Sigma Nu Executive Board
ECE Outreach

PROJECTS

SQLITE STORAGE MANAGER
Fall 2017
- Implemented a buffer pool manager, concurrent B+ tree, and write ahead logging for the SQLITE DBMS.

EXPERIENCE

DATABASE SYSTEMS
Teaching Assistant | Fall 2018
- Grading, helping students debug code
- Converting current infrastructure from using SQLite to PostgreSQL.

REDFIN - PERFORMANCE ENGINEERING
Software Eng Intern | Summer 2018 | San Francisco, CA
- Integrated Google Lighthouse into internal performance tests; Lighthouse provided a new lens on performance and is used to catch unintended regressions
- Engineered an efficient method of tracking and logging non-responsive interactions across the website; Data will help identify pages that are key sources of customer frustration

CAPITAL ONE
Software Eng Intern | Summer 2017 | San Francisco, CA
- Implemented a microservice to aggregate data and pipeline it into a model to predict credit card application fraud; Built a REST API for easy access.
- Worked on adding H2O.ai support to clipper, an open source prediction serving system.

SEI EMERGING TECHNOLOGY CENTER
Software Eng Intern | Jan 2016 – Jan 2018 | Pittsburgh, PA
- Used a corrective gradient refinement algorithm to localize a robot in a physical space.
- Worked on an application of CGR localization which could autonomously move the robot around in the space by clicking on a map.

DECISIVE ANALYTICS CORPORATION
ML/Software Eng Intern | Summer 2016| Arlington, VA
- Used support vector machines to model the virality of YouTube videos. The model used features such as sentiment of the video's comments.

RESEARCH

WI-FI BASED MATERIAL SENSING TO AUGMENT AUTONOMOUS VEHICLES
Spring 2018
- Using off-the-shelf WiFi cards to classify the material of an environmental object (eg. wood, metal, human) using its physical properties, and to determine what angle the object is at. Since WiFi signals can propagate around corners and through walls, we hope to use this technology for autonomous vehicles and searching disaster sites. Working with Diana Zhang and Dr. Swarun Kumar.