Archie Sravankumar

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Education

Cornell University **Ithaca, NY**

B.S. in Computer Science, Early Admit into M. Eng. Program *Aug 2018 - May 2022*

GPA: 3.85

Relevant Coursework: Foundations of Artificial Intelligence + Practicum, Machine Learning, Programming Languages, Computer System Organization, Systems Programming, Operating Systems, Probability Theory, Hons. Real Analysis, Number Theory, Mathematical Logic, Optimization I (Linear Programming)

Other activities: Former Treasurer and Economics/Business writer at The Advocate at Cornell

Experience

Flexport Inc. **San Francisco, CA**

Software Engineering Intern, Flexport.org *May 2021 - Present*

- Analyzed and evaluated several sources of data to determine optimal method to calculate ocean distance
- Incorporated novel calculation methods into Rails backend to increase carbon emissions accuracy by 24%
- Implemented asynchronous handling of emissions calculations that tracked shipment lifecycle
- Contributed to an industry standard accreditation of the carbon emissions calculator
- Stack and Technology: Looker, Ruby on Rails, RSpec, Pandas (Python), Pub/Sub pattern

Cornell University - Dept. of Computer Science **Ithaca, NY**

Research Assistant, Derecho Project *December 2020 - June 2021*

- Designed a $<1\mu s$ latency message queue system to load and invoke shared objects in the Cascade File System
- Analyzed systems to identify and correct performance-bottlenecks
- Integrated message queue into the distributed AI system
- Stack and Technology: C++, STL, gdb, gproc (profiling), Cascade, Template Metaprogramming

Frey Valet Inc. **Remote**

Contract Full Stack Developer *July 2020 - January 2021*

- Designed from scratch a real-time, scalable, contract marketplace aimed at streamlining parking services
- Stack and Technology: PostgreSQL Database, Django/DRF, Swift/UIKit, MapKit, Redis PubSub, AWS LightSail, Docker, Stripe API, OAuth

Cornell University - Dept. of Computer Science **Ithaca, NY**

Teaching Assistant, Hons. Discrete Structures and Functional Programming *July 2020 - January 2021*

- Mentored and managed 2 teams in creating final projects in Functional Programming
- Assessed and provided feedback for over 50 students.
- Led discussion sections in Functional Programming to augment students' learning from lectures

Maxar Technologies, Space Solutions **San Jose, CA**

Software CORE Engineering Intern *May 2020 - Aug 2020*

- Accelerated binary CAN bus command binary generation 10x by creating python tool
- Combined object-oriented and functional programming to produce programmer-friendly, and user-friendly tools
- Documented testing workflows and legacy code
- Stack and Technology: Flask, HTML, CSS, JavaScript, Python, Openpyxl

Skill Set

Languages: C/C++, Java, Swift, Python, OCaml, SQL, Javascript, Ruby, LaTeX

Libraries, Frameworks, Technologies: C++ Standard Template Library, MongoDB, ExpressJS, React and NodeJS (MERN); Django; Flask; SwiftUI, iOS, Ruby on Rails; scikit-learn; keras; Web Security; AWS LightSail Container Service; Docker; git;

Other software skills/values: Test Driven Development; Writing idiomatic code

Awards

CES Young Innovators Award 2018 (Predicting Alzheimer's Disease from retinal fundus images)
Caltech Harvey Mudd Math Contest Fifth place

Research and Projects

Combinatorics Research: https://arxiv.org/pdf/1806.00474.pdf

Lumen: Machine Learning algorithm to diagnose Alzheimer's Disease from retinal fundus images.
Skills/Techniques: Image pre-processing (watershedding, skeletonization, etc.), Convolutional Neural Networks

Boa: An OCaml interpreter for a statically typed, polymorphic, type-inferred programming language with Python-inspired syntax. **Link to repo**: https://github.com/BoaLanguage/boa