Sambhav Sunkerneni

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Education

University of California, Berkeley 2017 - 2021
B.A. Computer Science GPA: 3.70
Upsilon Pi Epsilon Honor Society: Top Third of CS Majors
Highlighted Courses: Operating Systems, Computability & Complexity, Data Structures, Algorithms, Computer Architecture, Linear Algebra, Discrete Math & Probability, Applied Machine Learning

Experience

Convoy (Google Funded Unicorn Startup) | **Software Engineering Intern** *May 2019 - Aug 2019*
- Built embedded email client to allow operations specialists to efficiently schedule warehouse appointments from internal logistics management web app
- Automated template selection and population based on existing shipment profiles, allowing 300+ operations specialists to send scheduling emails with just two clicks
- Wrote backend service that attaches and parses tracking UUIDs to identify relevant email threads and display them directly next to corresponding shipment models, in internal web app

Intel | **Software Engineering Intern** *May 2018 - Aug 2018*
- Built system to automatically generate properly-wired VLSI modules from raw instance data
- Designed probabilistic string similarity algorithm to classify wire rules, with over 98% accuracy
- Used summary statistics and an unsupervised SVM model to detect anomalies in circuit data
- Wrote parser to search for missing standard cells in specific areas of large code files

UC Berkeley EECS Department | **Academic Intern** *Jan 2018 - May 2018*
- Tutored students for CS 61A (Intro to CS) and taught lessons on basic asymptotic analysis

Evergreen ECS Society | **President, Cofounder** *Aug 2015 - May 2017*
- Spearheaded content creation, management, and teaching of 30+ Python workshops & classes at multiple local libraries, as leader of registered nonprofit

Skills & Personal Projects

Languages: Python, TypeScript, JavaScript, C, Scheme, Java
Technologies: Unix, Git, Flask, Express, GraphQL, React, Postgres, Scikit Learn, Pandas

Caterpyl – **C Compiler** (Python)
- Wrote compiler from scratch that translates core subset of C language to x86_64 assembly
- Performs optimizations, semantic analysis, type checking, and byte-level memory allocation.
- Implemented stack-based parameter passing, symbol table creation, and register allocation
- Lexes code into tokens, parses tokens to generate abstract syntax tree, traverses tree to create three address code, and converts three address code to assembly language

Wigle – **Wikipedia Search Engine** (Python)
- Wrote keyword-based search engine that serves fast, accurate Wiki search results
- Crawls Wikipedia, generates a reverse-dictionary of links, checks for partial or full title matching, and uses PageRank-inspired reputation and relevance heuristics to determine overall rank

Phase – **Imperative Programming Language** (Python)
- Designed and implemented a new interpreted programming language.
- Language supports multiple data types (strings, ints, floats, lists), lexical scoping, user-defined functions, control statements, recursion, comments, and detailed line-specific error reporting

Awards

MIT Battlehack Programming Competition, 3rd Place 2018
AIME Qualifier (Top 2% out of 150,000 Students in national math contest) 2016, 2017
Cal Alumni Association Leadership Award Scholar 2017