Sambhav Sunkerneni

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Education

University of California, Berkeley Expected 2020
B.A. Computer Science CS GPA: 4.00, Overall GPA: 3.80
Upsilon Pi Epsilon Honor Society: Top Third of CS Majors
Highlighted Courses (Current): Operating Systems, Computability & Complexity, Data Structures, Algorithms, Computer Architecture, Linear Algebra, Discrete Math & Probability, Applied Machine Learning

Experience

Convoy (YC Backed Unicorn Startup) | **Software Engineering Intern** *May 2019 - Aug 2019*
- Incoming intern on Marketplace team.

UC Berkeley EECS Department, NetSys Lab | **Research Assistant** *Nov 2018 - Current*
- Helping Dr. Hithnawi to develop packet scheduling algorithm that adapts to changing objectives

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
- Received award to recognize "excellent coding skills and willingness to learn"

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, JavaScript, C, Scheme, Java
Technologies: Unix, Git, Flask, Express, jQuery/AJAX, Scikit Learn, Pandas

Caterpyl – **C Compiler** (Python)
- Wrote compiler from scratch that translates core subset of C language to x86_64 assembly
- 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

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

Tileman – **Tile Based Adventure Game** (Python, Pygame)
- Built tile-world representation system implementing data compression, dynamic tile-object rendering, smooth map rastering, and OOP hero-environment interactions

Pictacular – **Photo Mosaic Creator** (Python, Flask, Pillow, JavaScript)
- Designed photo approximation algorithm using dynamic programming and color sampling techniques to efficiently construct mosaic from database of thousands of images

Awards

MIT Battlehack Programming Competition, 3rd Place 2018
Jane Street Electronic Trading Competition, 8th Place 2018
AIME Qualifier (**Top 1.5%** out of 170,000 Students in national math contest) 2016, 2017
Cal Alumni Association Leadership Award Scholar 2017