Parth Nobel

✉ parthnobel@berkeley.edu ptnobel.github.io linkedin.com/in/PTNobel github.com/PTNobel

Education

University of California, Berkeley; College of Engineering Class of 2021
Regents' and Chancellor's Scholar (Top <1% of applicants) GPA: 4.0/4.0
B.S., Electrical Engineering and Computer Science (EECS)

- EE: Oscillators (Graduate Course); Designing Information Devices and Systems I & II
- CS: Operating Systems; Efficient Algorithms and Intractable Problems; Data Structures; Machine Structures; Structure and Interpretation of Computer Programs
- STEM: Discrete Mathematics and Probability Theory; Multivariable Calculus; Linear Algebra and Differential Equations; Abstract Algebra

Work Experience

Apple Inc. Incoming Biophotonics Intern May–Aug 2019

UC Berkeley EECS Department Research Assistant Aug 2018–Present

- Enhancing and documenting the Accurate Booleanization of Continuous Dynamics for Non-Linear Systems (ABCD-NL) as part of Professor Jaijeet Roychowdhury's Group
  - ABCD-NL transforms HSPICE and Verilog models of circuits into Finite State Machines (FSMs) to facilitate formal verification and improve simulation speed
  - Added support for off-loading high computation operations to remote servers
  - Redesigned APIs to improve usability

HP Inc. Full Stack Engineering Intern May–Aug 2018

- Led design and server implementation of REST API to automate visualization of test data
- Wrote a SQL query generator to replace long hand-written SQL statements
- Added user accounts, restructured database, and redesigned the UI of a proof-of-concept web service to make it feature complete in preparation for launch

Projects

Shape in Stereo C and RISC-V Assembly Programs Sep–Nov 2018

- Implemented a computer vision algorithm to calculate object depth based on offset images
- Optimized to be 9x faster with SIMD instructions and OpenMP for thread-level parallelism

Pipelined RISC-V CPU Logisim Nov 2018

- Designed and implemented Datapath, Control Logic, Arithmetic Logic Unit, and Regfile

UCBMUN.org Website Python Program May–Aug 2018

- Designed and built a Model UN conference's website from scratch using Flask

Voice Controlled Miniature Car Hardware Project Feb–Apr 2018

- Wrote software using PCA and k-means to classify spoken command words
- Designed closed-loop control scheme for car to drive straight and to turn

Scheme Language Interpreter Python Program Oct–Nov 2017

- Completed an interpreter for Scheme, a Lisp variant
- Implemented input parsing, tail recursion optimizations, and Scheme primitives

Skills

Languages: Python, Java, C, Ruby, MATLAB, JavaScript, SQL, Rust, Scheme, CoffeeScript, Bash
Technologies: Android, Git, Ubuntu, Debian, Fedora, Arch Linux, HTML/CSS, LaTeX, Docker
Libraries: Numpy, Pandas, OpenMP, Spark, Ruby on Rails, Django, Flask, Swing, Bootstrap, MAPP

Honors and Awards

Eta Kappa Nu (HKN) EECS Honor Society August 2018–Present
Dean's Honors List, College of Engineering Dec 2017, May 2018
Honors To Date, College of Engineering Dec 2017, May 2018