Nikhil Pimpalkhare

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Education

Princeton University — Princeton, NJ
Masters of Science in Engineering, Computer Science — *August 2021 – May 2023*

University of California, Berkeley — Berkeley, CA
Bachelor of Science in Electrical Engineering and Computer Science, GPA: 3.99 — *August 2017 – May 2021*

- Coursework: Formal Methods, Machine Learning, Information Theory, Probability and Random Processes, Operating Systems, Signals and Systems, Convex Optimization Models, Computability and Logic
- Awards: Regents and Chancellor's Scholarship, Dean's List, Eta Kappa Nu (EECS Honors Society)

Teaching and Work Experience

Undergraduate Student Instructor — Berkeley, CA
CS61C: Great Ideas in Computer Architecture — *Fall 2019, Spring 2020, Fall 2020, Spring 2021*

- Taught weekly 2 hour lab and 1 hour discussion sections for around 35 students
- Assisted in developing homework, projects, and exam content for course
- Provided support through course forum and held office hours for hundreds of students

CS70: Discrete Mathematics and Probability — *Summer 2020*

- Taught daily discussion section for around 20 students
- Collaborated with fellow staff members on homework and exam review

Intuit Summer Intern — Mountain View, CA
GoPayment Server Team — *Summer 2019*

- Designed and implemented card reader tracking endpoint for consumption by entire Payments ecosystem
- Integrated live tracking for readers ordered through UPS, Fedex, and DHL and wrote a thorough testing suite
- Demoed work at company all-hands

GoPayment Android Team — *Summer 2018*

- Used natural language processing tools and company-built API to design, train, and implement a conversational help assistant for Android
- Wrote Espresso automation tests and addressed critical production crashes
- Participated in Agile workflow, including daily stand-ups, biweekly sprints, and monthly demos

Academic Research Publications

1. **N. Pimpalkhare**, 2020.
   Dynamic Algorithm Selection for SMT
   In 35th IEEE/ACM International Conference on Automated Software Engineering (ASE '20), September 21–25, 2020.

2. **N. Pimpalkhare**, F. Mora, E. Polgreen, and S. Seshia, 2020.
   MedleySolver: Online SMT Algorithm Selection
   In 24th International Conference on Theory and Applications of Satisfiability Testing (SAT '21), July 5-9, 2021

Projects

MedleySolver: Algorithm selection tool for Satisfiability Modulo Theory queries, uses online reinforcement learning and likelihood estimation techniques for strategy selection
Entropic Analysis of Multi Armed Bandit: Literature survey conducted for Information Theory course, analyzing classic RL formulation through the lens of entropy
PintOS: Fully functional operating system built for Operating Systems class, involved self-designed implementation of user program infrastructure, thread scheduling, and file system management

Technical Skills

Languages: Python, C, Java, C++, Javascript, Bash
Frameworks: React, Node.js, Flask
Developer Tools: Git, Docker, Google Cloud Platform, VS Code, IntelliJ, SLURM
Libraries: NumPy, Matplotlib, Scikit-Learn, TensorFlow