

Neil Patil

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github.com/patil215
neilpatil.me

EDUCATION

Pursuing B.S. in Computer Science, Physics - University of Texas at Austin 2016 - 2020
Turing Scholars Honors Program GPA: 3.92

Coursework: Ethical Hacking (planned), Secure Systems (planned, graduate), Robot Learning (graduate), Data Science, Machine Learning, Data Structures, Operating Systems, Computer Architecture, Graphics, Competitive Programming

EXPERIENCE

Production Engineering Intern - Facebook May 2018 - present

- Developed a tool to automate efficiently allocating, swapping, and tracking hardware capacity across datacenter job pools
- Facilitated onboarding the tool's CLI, cutting engineer time to provision hardware from days to minutes

Software Engineering Intern - Google Summer 2017

- Migrated Android's one-tap device setup feature to a more secure and reliable Bluetooth + NFC protocol
- Implemented secure handshake using the SPAKE protocol, and worked with security teams to roll out to all Android devices

Software Engineering Intern - Atlassian Summer 2016

- Created a automated Spring/MySQL framework to monitor quality and reliability of user feedback data
- Improved systems for feedback collection, using Python to automate collecting data through demo followup emails

Software Engineering Intern - Indeed Summer 2015

- Created a Javascript + regex system to auto-fill job applications using a resume, deploying it within the Indeed iOS app
- Prototyped a Django webapp and Android app to automatically search for jobs based on a user's resume

ACTIVITIES

Information Systems & Security Society - Co-President April 2017 - present

- Lead a team to create university-wide CTFs, with problems ranging from web exploitation to reversing to networking
- Give presentations teaching members common security concepts (SQL injection, port scanning, TCP/IP, etc)
- Compete in national CTFs under the team name "Steam Locomotive"

UT Robocup@Home Team, UT Building-Wide Intelligence Lab January 2018 - present

- Member of UT's Robocup@Home research team, training a Toyota HSR robot to sort and store groceries on a cupboard
- Wrote the majority of the robot's manipulation and navigation logic using ROS, Gazebo, and smach

PROJECTS

LASACTF Computer Security Contest - Co-Creator (lasactf.com) Jan 2016 - April 2016

- Online computer security competition for high school students with 5000+ competitors worldwide
- Led a team of 10 to write problems and create a Flask + MongoDB website to run the competition

Battlecode 2018 - Finalist (github.com/patil215/battlecode-2018) February 2018

- Developed a bot for MIT's game AI competition, placing 9th internationally

Deep Drone (neilpatil.me/doc/drone_paper.pdf) September 2017 - January 2018

- Research project using DDPG to train a drone to navigate and avoid obstacles in simulation (using ROS + Gazebo + Tensorflow)

SKILLS

Languages/Frameworks: Python, C++, Java, UNIX/Bash, ROS

Tools/Libraries: Kali Linux (nmap, Wireshark, etc), Git, Tensorflow, AWS/infra, SQL, Thrift/Protobuf

Concepts/Skills: data mining, networking / network security, hardware prototyping (Arduino, 3D Printing, etc)