Ishaan Thakur

Contact Information

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Education

Cornell University, Ithaca, NY
B.S., Electrical and Computer Engineering; Minor, Computer Science **Exp. Dec 2020**
Transferred from University of Illinois at Urbana-Champaign in Summer 2018

Relevant Coursework: Algorithms, Machine Learning, Operating Systems, Embedded Systems, Networks, Competitive Programming, Data Structures, Discrete Math, Digital Signal Processing

Professional Experience

On Pepper New York, NY
Software Engineer Intern **Mar 2020 – present**

• Developing ML models for a robust Asset Management System.

ESnet, Lawrence Berkeley National Lab San Francisco, CA
Software Engineer Intern - Scientific Network Team **May 2019 – Jun 2019**

• Developed a tool for visualizing high-speed network packets received from network adapters.
• Programmed telemetry collector in Golang and setup WebSocket connections for handling 100 Gbps transfer of telemetry data.
• Stored real-time network packets using InfluxDB and monitored packet loss using Grafana.

Autonomous Systems Lab, Cornell University Ithaca, NY
Undergraduate Research Assistant **Sep 2018 – Nov 2018**

• Developed a MATLAB interface for receiving beacon information and range estimation over WiFi from an IRobot Create2 platform with an accuracy of 87%.

Swarm Robotix (Nokia Bell Labs) Naperville, IL
Software Engineer Intern - Sensor Software and Controls Team **May 2018 – Jul 2018**

• Created a localization system for autonomous mobile robots in C++ and implemented visual SLAM for mapping unknown environment.
• Used A* / Dynamic Window Approach Algorithms with formation control to improve existing path planning solution by 20%.

WaggleNet, UIUC Champaign, IL
Undergraduate Research Assistant **Mar 2018 – May 2018**

• Built a data-logger in Arduino that reads and displays data from various sensors in a mesh network with an accuracy of more than 95%.
• Developed an Identity Access Management system to support email verification and password recovery on the website.

BioSensors Lab, UIUC Champaign, IL
Undergraduate Research Assistant **Mar 2018 – May 2018**

• Researched and integrated different sensors with GPS in an underwater camera module and refined C++ code improving latency of polarization data obtained at different depths/times of day by 5%.

HexNest, Inc. Urbana, IL
Co-Founder and Safety Researcher **Mar 2018 – May 2018**

• Built visualization tools for safety testing of gymnastic mats. Improved Safety by 62%.
• Pitched the product in several startup ventures such as iVenture Accelerator Program.

Personal Projects

Change Me: A Chrome Extension that allows users to edit any web page and take its screenshot.

Tweet Sentiment Analysis: Used Tweepy API to score user's twitter tweets and visualized data.

Cornell Chatbot: Implemented Tensorflow's Sequence to Sequence model to train a chatbot on Cornell's Movie Dialogue Dataset.

Programming Experience

Languages: Proficient: Java, C++, Python | Familiar: C, HTML, CSS, JavaScript, Verilog
Tools: Git, LaTeX, Cloud (AWS, Firebase), Big Data (Kafka, Spark), Databases (MongoDB, InfluxDB, MySQL), Web (Node.js, React, P5.js), Machine Learning (NumPy, SciPy, Scikit Learn)

Awards + Involvement

Dean's List (2017-19); Second Place, Cornell Robotics Competition (2019); First Place, ECE Pulse Design Competition (2018); First Place, Innovation Idea fair, UIUC (2017); Top 5 teams, Northwestern Hackathon (2017); IEEE (2017 – Present); ACSU (2018 – Present)