Ishaan Thakur

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EDUCATION

CORNELL UNIVERSITY
BS in Electrical & Computer Engineering
Minor in Computer Science
Expected Dec 2020 | Ithaca, NY
Dean's List (Fall' 18)

UNIVERSITY OF ILLINOIS
BS in Electrical Engineering (transferred after freshman year)
May 2018 | Urbana-Champaign, IL
Dean's List (All Semesters)
Edmund J. James Scholar

COURSEWORK

- Embedded Operating Systems
- Operating Systems
- Intelligent Physical Systems
- Embedded Systems
- Competitive Programming
- Data Structures & Algorithms
- Discrete Structures
- Digital Logic & Computer Org
- Signals And Information
- Intro Circuit Analysis

CERTIFICATIONS

Deep Learning Specialization
Deeplearning.ai (Coursera)
Intro To Engg Simulations
Cornell University (edX)
Crash Course in Data Science
Johns Hopkins University (Coursera)
Intro To Engg Mechanics
Georgia Tech (Coursera)

SKILLS

PROGRAMMING
C • C++ • Java • Python
Matlab • HTML • CSS • Javascript
LaTeX • Arm Assembly • Verilog
Arduino • MySQL • Git
FRAMEWORKS
ROS • Kafka • Pandas • Numpy
Matplotlib • React.js • Node.js • P5.js
Tensorflow
3D DESIGN AND SIMULATION
ANSYS • Inventor • Fusion 360
LabTracer • LabVIEW

INVOLVEMENT

Cornell AppDev - IOS AppDev (2018-19)
IEEE, ACSU - General Member(2018-19)
Engg Open House - Team Lead (2018)
IROBOTICS - MRDC' 21 Lead (2017-18)

WORK EXPERIENCE

ENERGY SCIENCES NETWORK (ESNET) | Software Engineering Intern
May 2019 - Aug 2019 | Lawrence Berkeley National Lab, Berkeley, CA

- Full Stack Developer-Implemented a data visualizer comprising of a Moving Average Low Pass FIR filter to monitor high-speed network packets with an accuracy of 93%.
- Responsible for monitoring TCP performance, network security and real-time debugging for network services provided to US DOE scientists in real time.
- Used Javascript, python, Go, P5.js, D3.js, node.js, AWS, WebGL and Websockets.

SWARM ROBOTIX (NOKIA HUB 88) | Software Engineering Intern
May 2018 – Jul 2018 | Nokia Bell Labs, Naperville, IL

- Managed the Sensor Software and Controls Team. Worked on Path planning for a swarm of four robots capable of lifting shipping containers using A*/D* Lite algorithms.
- Wrote publisher and subscriber ROS nodes for Lidar and Ublox IMU sensors in C++, python and published point cloud data to Hector SLAM with a precision of 95%.

RESEARCH

AUTONOMOUS SYSTEMS LAB | Undergraduate Researcher
Sep 2018 – Nov 2018 | Cornell University, Ithaca, NY

- Integrated an Intel Real Sense RTK camera with an iRobot Create2 platform and wrote a MATLAB interface for receiving beacon and range information over wifi with an accuracy of 87%.

HEXNEST | Safety and Optimization Researcher
Mar 2018 – May 2018 | Urbana, IL

- Designed and coded for sensors in C++, python required for safety testing and data interpretation for gymnastics mats. Helped increase safety index by 62%.

WAGGLENET | Undergraduate Research Assistant
Mar 2018 – May 2018 | University of Illinois at Urbana-Champaign, IL

- Developed a real time monitoring system in C++ to monitor the health of honey bee colonies. Improved the signal to noise ratio in the system by 10%.

BIOSENSORS LAB | Undergraduate Research Assistant
Mar 2018 – May 2018 | University of Illinois at Urbana-Champaign, IL

- Integrated GPS with different sensors in an underwater camera module and refined C++ code improving accuracy of polarization data obtained by 5%.

PROJECTS

SPACE INVADERS

- Designed a Space Invaders based I/O game in C, C++ using FRDM K64F micro-controller board and a 32x32 Adafruit RGB LED.

HEART RATE MONITOR

- Used combinational ALU to develop a microprocessor in verilog capable of executing sequential code including branching and halting logic. Displayed heart rate as an output.

SMART ALARM CLOCK

- Used Arduino Yun and Leonardo processors to design an alarm clock that alerts based on one's Google calendar and gmail. Used Temboo services to interact with calendar and mail utilities.

AWARDS

2018 First Place, ECE Pulse Design Competition, UIUC
2018 Nominated for Illinois Innovation Prize
2017 First Place, Innovation Idea Fair
2017 Among top 5 Teams, Northwestern Annual Hackathon
2017 Rank Holder, National Math Olympiad