Adam Patni

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Education

Georgia Institute of Technology – Atlanta, GA Expected Graduation: May 2023
Bachelor of Science in Computer Science
Stamps President's Scholar – Full-Ride Merit Scholarship awarded to top 1% of students
GPA: 4.0

Work Experience

Robotics Intern, EverestLabs.AI May 2019 – August 2019
Fremont, CA

- Developed a control system for a 4-axis industrial robot (Mitsubishi Electric RH-20FH) to pick up recyclables and aluminum cans off conveyor belts in single-stream waste management facilities.
- Designed and implemented suction cup end-effectors for a Nachi MZ03EL 6-axis robot

Bits'N'Bytes4Kids – CEO/Founder May 2015 – August 2017
Lisle, IL

- Private programming tutor, developed curriculums for Python, Scratch, and EV3 languages.
- Trained 10+ students become proficient in computer programming. Hired a peer to tutor additional students.

Projects

Computer Vision and Robot Control

- Computer Vision Application for FRC Robots to detect and travel towards retroreflective targets
- https://github.com/HuskieRobotics/Huskie-Vision
- https://github.com/aapatni/chipy2017

CAD Models

- Portfolio of Models: http://bit.ly/2P8Ita2
    - FRC Robot – developed as captain of Huskie Robotics throughout competition season
    - Swerve Modules – holonomic drivetrain modules which allow independent chassis translation and rotation
    - Gearbox 775 – experimental drivetrain gearbox with pneumatic ball shifting and integrated encoder
    - 3D Printed Drone – drone frame designed to print in a single continuous pass, no assembly required

Extracurricular Activities

FIRST Robotics Competition – Robot Captain (2019), Chief Robot Designer (2018), Software Lead (2017)

- Led team of 90+ students to build competitive robots and impact local community through STEM outreach
- Coordinated mechanical, assembly, electrical, software, and fabrication subteams
- Developed open-source Computer Vision that allows a robot to autonomously detect targets and travel towards them

Chicago Python Mentorship Group

- Developed computer vision framework for object detection and robot navigation with a mentor from Argonne National Laboratories. First student ever to graduate program.
- Awarded 2nd Place for presentation at Chicago MHub Conference

Startup Exchange Membership Program

- Developing and executing upon business plan to provide a food ordering experience within college football stadiums
- Connect with local Atlantan startups, founders, and mentors to workshop ideas and discuss entrepreneurship

Grand Challenges Living Learning Community

- Developing food management and inventory software for local Atlantan food pantries to improve accessibility

Awards and Recognition

1. Stamps President's Scholar at Georgia Tech
2. FIRST Dean's List Semifinalist
3. FIRST Innovation in Control Award
4. 2nd Place Chicago Python Mentorship Program

Leadership

FIRST Lego League Mentor September 2015- December 2019

Naperville, IL

- Co-chaired FIRST Lego League Double Qualifying Tournament with 750+ attendants and 32 teams. Designed a summer camp curriculum for 30 students in the district to learn programming and mechanical design.
- Mentored elementary school Lego robotics teams in design, problem solving, programming for 250+ hours.
- Coordinated mentoring for 10 local teams and 15 mentors

Peer Tutor September 2016 - May 2019

Naperville, IL

- Spent lunch periods and mornings (230 hours) tutoring peers in various subjects
- 70+ sessions with peers throughout the school, helping them with homework, test corrections, and exam prep

Skills

Computer Science

- Languages**:** Python, Java, C, LabVIEW, BASIC,
- Concepts**:** Machine Learning, Computer Vision, Advanced Data Structures, Networking, Multithreading, Feedback Controllers (PID), Object Oriented Programming,
- Other**:** Git/GitHub, OpenCV, scikit-learn, Numpy, Pandas, Jupyter Notebook, Flask, Raspberry Pi, Linux

Mechanical Engineering

- Inventor Autodesk, General Shop Tools, 3D-Printing (Prusa, Ultimaker, Ender)

Electrical

- Soldering, Crimping, Pneumatics, General Circuitry