

Andrew Garrett

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EDUCATION

UNIVERSITY OF PENNSYLVANIA

MSE: ROBOTICS, FOCUS IN AI & ML
Aug 2021 - May 2023 | Philadelphia, PA
School of Engineering
Cum. GPA: 3.4 / 4.0
BSE: MECHANICAL ENGINEERING
Aug 2018 - May 2021 | Philadelphia, PA
School of Engineering
Minors: Computer Science, Mathematics
Cum. GPA: 3.5 / 4.0

COURSEWORK

CS

Deep Learning • Computer Vision
Autonomous Driving • Machine Learning
Artificial Intelligence • Robotics

ME

Design & Controls of UAVs • Vibrations
Solid Mechanics • Fluid Mechanics
Statics • Dynamics • Mechanical Design

SKILLS

HARD SKILLS

Fullstack Development (Edge, Cloud)
Algorithms • Data Structures
Machine Learning • Deep Learning
Computer Vision • Controls
Simulation • Mechanical Design

SOFT SKILLS

Teamwork • Leadership • Planning
Project Development • Research

SOFTWARE

LANGUAGES:

Python • Java • Typescript
MATLab • C++ • Shell • \LaTeX

TECHNOLOGIES:

Git • AWS • Docker • Ansible
Linux • CUDA

INTERESTS

Origami • Art • Sailing
Tennis • Soccer • Golf

EXPERIENCE

RIVIAN AUTOMOTIVE INC.

SOFTWARE ENGINEERING INTERN - VIRTUAL ENGINEERING

May 2022 - December 2022 | Palo Alto, CA

- Trained and deployed an object detection model on the edge (93% mAP over 7 classes), used to track vehicles by VIN through End of Line lifecycle
- Developed HTTP live-streaming fullstack application for viewing historical and live camera data from over 50 edge devices
- Led software and hardware R&D for semi-autonomous point cloud acquisition and registration with Boston Dynamics Spot robot and laser scanner

LABORATORY OF DR. JIANBO SHI

COMPUTER VISION RESEARCH INTERN

May 2021 - May 2022 | Philadelphia, PA

- Completed rigorous training in Computer Vision and Deep Learning techniques, both theoretically and in Python implementation
- Coordinated with Toyota Research to collect and prepare 20 hours of a multimodal video dataset of human subjects solving escape room scenarios.
- Built a pipeline for synchronized video recording from up to 7 cameras, Post-processed human gaze-data for fixations and 3D-gaze, and RGB-D data for 3D Reconstruction and 3D human-pose estimation

VIJAY KUMAR ROBOTICS LABORATORY

UNDERGRADUATE RESEARCH ASSISTANT

October 2019 - December 2020 | Philadelphia, PA

- Served as Mechanical Design Lead for a medium sized quadrotor platform with 6D-pose end-effector
- Utilized SolidWorks to perform FEA and CFD, led manufacturing of carbon-fibre frame and custom-machined parts for a full physical prototype

VOLUNTEERING

ADVENTURES CROSS-COUNTRY - ARCC | STUDENT VOLUNTEER

July 2017 - August 2017 | Ladakh, India

- Worked at a local primary school to teach English to Ladakhi children
- Refurbished three classrooms and helped build a playground for said students

July 2016 - August 2016 | Kampong-Speu, Cambodia

- Worked at a local primary school to teach English and Math to Khmer children
- Constructed and installed 40+ bio-sand, clean water filters for needy families in Asia's poorest province

EXTRACURRICULAR ACTIVITIES

UNIVERSITY

- American Society of Mechanical Engineers (ASME) - Chapter Board Member
- Penn Undergraduate Math Society (PUMS) - Chapter Board Member
- Penn Undergraduate Refugee Empowerment (PURE) - Member
- Phi Gamma Delta (FIJI) - Chairman of Mental Health