Jacob Platin

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EDUCATION AND SKILLS

University of Pennsylvania, School of Engineering and Applied Science — **Philadelphia, PA**
*MSE in **Robotics** (Computer Vision Specialty), GPA 3.7/4.0 (Magna Cum Laude)* — Aug 2017 – May 2022

- **Relevant Coursework**: Machine Learning, Network System Design, Computer Vision, Deep Learning

University of Pennsylvania, School of Engineering and Applied Science — **Philadelphia, PA**
BSE, Majors in ***Computer Science*** & ***Economics***, *GPA 3.5/4.0 (Cum Laude)* — Aug 2017 - May 2022

- **Relevant Coursework**: Cloud Computing/Scalability, Econometrics, Game Theory, Data Structures, Software Design

ETH Zurich, Departments of Computer Science and Economics — **Zurich, Switzerland**
Exchange Program, GPA 3.75/4.0 — Sep 2019 - Dec 2019

- **Relevant Coursework**: Computer Architecture, Reliable Artificial Intelligence, Wireless/Mobile Computing

EXPERIENCE

Microsoft | *Software Engineer II (Machine Learning)* | Redmond, WA — **December 2023 – Present**

- Integrating internal speech models and LLMs to achieve SOTA multi-modal model performance
- Leading two sub-teams dedicated to increasing model size and training speed at minimum compute cost

Microsoft | *Software Engineer (Machine Learning)* | Redmond, WA — **August 2022 – November 2023**

- Led efforts on optimizing model size, performance, and throughput for Microsoft's latest speech recognition models by applying state-of-the-art sharding, networking, and architecture-based techniques
- Maintain and refine the software framework that over 200 members of the Azure AI Speech team use to train models
- Fostering an inclusive and growth-oriented team by organizing paper readouts and learning sessions

Unity Technologies | *Software Engineer Intern (Robotics)* | Seattle, WA — **May 2021 - August 2021**

- Utilized linear algebra and robotics techniques to integrate inverse kinematics directly into Unity
- Implemented joint controllers to model realistic robotic behavior
- Engineered a VR experience to capture a robot's workspace in Unity

NVIDIA | *Software Engineer Intern* | Redmond, WA — **February 2021 - May 2021**

- Developed a cloud-based searching solution for game meta-data using Elasticsearch, GraphQL and AWS
- Spearheaded project architecture and implementation, in addition to documentation
- Created novel, scalable searching algorithms

Unity Technologies | *Software Engineer Intern (AI)* | Seattle, WA — **May 2020 - August 2020**

- Explored and implemented classical and machine-learning driven robotic manipulation in the Unity engine
- Integrated motion planning and inverse kinematics for robotic arms (e.g. UR3) into Unity
- Tested and integrated a more efficient bridge between ROS and Unity

Aidoc | *Cloud Computing Intern* | Tel Aviv, Israel — **June 2019 - August 2019**

- Deployed medical (including pulmonary embolism and intracranial hemorrhage) prediction algorithms and data selection tools on AWS EC2 instances with a robust EFS and EBS storage solution using Python
- Participated in weekly discussions on state-of-the-art medical deep-learning algorithms and used Keras to test the feasibility of these developments on Aidoc's current prediction algorithms

PROJECTS AND TECHNICAL LEADERSHIP

Wharton Undergraduate Aerospace Club | *Co-Founder* — **October 2020 – May 2021**

- Co-founded Wharton's first aerospace club focused on applying business principles to aerospace creatively

CAS-NN (Commercial Air Safety – Neural Network) | *Lead* — **June 2019 – February 2020**

- Developed a robust neural network to detect maintenance anomalies in commercial aircraft
- Anomalies include metal fatigue and fuse-pin misalignment, and adversarial defense techniques are used

Penn Aerospace Club | *Co-Head* — **August 2017 – December 2021**

- Spearheaded Penn's 100-person aerospace club, including overseeing rocketry, ballooning, and aircraft teams
- Enabled our teams to travel to the 3 national competitions and complete over 10 progressive launches

OTHER LEADERSHIP

Phi Kappa Psi | *President* — **November 2019 – May 2020**

- Led the Iota chapter at Penn, which has over 70 members and partakes in a variety of community events