

Amar Maksumić

New York, NY

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Education

Rensselaer Polytechnic Institute (GPA: 3.95)

Troy, NY

B.S. IN COMPUTER SCIENCE AND COMPUTER SYSTEMS ENGINEERING

Aug. 2021 - Dec. 2024

- Minor in Literature and Creative Writing
- Inducted into the Archimedean Program; a program for Rensselaer Polytechnic Institute's highest achieving students.
- Relevant Coursework: Foundations of Computer Science, Data Structures, Intro to Electrical, Computer, & Systems Engineering, and CAD

Experience

Rensselaer Motorsport

Troy, NY

POWERTRAIN LEAD

Jul. 2022 - Present

- Leading development of RM's first electric powertrain: EMRAX 228 motor with a Cascadia RMS PM100DX motor controller
- Developing the hardware and control systems (i.e. Traction Control, Launch Control, Regen Braking) for the powertrain
- Designing the Battery Management System for our custom accumulator
- Working alongside chassis, cooling, and drivetrain subsystems to develop a high-performing car that meets competition regulations

FULL TIME MEMBER / ELECTRICAL SOFTWARE ENGINEERING

Mar. 2022 - Jul. 2022

- Focused on research for wireless telemetry and strain gauge systems; Worked on wiring harness manufacturing

RPI Robotics

Troy, NY

OFFICER

Apr. 2022 - Present

- Working on Laser Tag Robots (iRobot Create 3's that play laser tag using an infrared targeting system)
- Restarting RPI Robotics with fellow Officers after a 2+ year hiatus period

FIRST Robotics Competition Team 2601: the Steel Hawks

Flushing, NY

ELECTRICAL AND SOFTWARE ENGINEERING MENTOR

Nov. 2021 - Present

- Mentoring a subsystem of 30+ students on how to develop and implement computer vision algorithms and autonomous routines

VICE PRESIDENT OF FABRICATION AND SOFTWARE ENGINEERING

Jul. 2020 - Jun. 2021

- Lead several subteams: Mechanical, Electrical, Programming, and CAD/Design
- Initiated and directly worked on several team-wide projects: Machine Learning based Computer Vision system, Encoder and Timed-Command based Autonomous Control System, and design of a Power Take-Off Gearbox

TA PC Repair

Astoria, NY

COMPUTER REPAIR TECHNICIAN

Jun. 2018 - Aug. 2018

- Built and repaired personal and company machines: worked on software and hardware related issues

Honors & Awards

Fall 2021, Spring 2022 RPI Dean's Honor List

Troy, NY, USA

2020, 2021 Recognition in Mu Alpha Theta National Math Honor Society

New York, NY, USA

Skills

Languages: C, C++, Python, Java, JavaScript, TypeScript

Software: JetBrains Suite, VSCode, Terminal, Git, Matlab, LTSpice, OnShape, SolidWorks, Siemens NX

Portfolio

ML-CV (Machine Learning based Computer Vision)

- A hybrid between traditional CV algorithms using OpenCV and object detection using a MobileNet SSD v2 model
- MobileNet model used for localization of objects, and custom OpenCV algorithms used for computing precise location details

Aquila Heavy (Thrust Vectoring Control model rocket)

- Worked on the data acquisition, telemetry, and PID feedback loops for TVC module on Aquila Heavy: my engineering final-project in high school

BlueComms (clipboard between computers)

- Python script with client and server ends to enable clipboard sharing between computers