HAYK STEPANYAN

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EDUCATION

Georgia Institute of Technology Atlanta, GA
Bachelor of Science in Computer Science *Aug 2020 - May 2024*

- GPA: 3.86 / 4.00 (STEM GPA: 4.00 / 4.00)
- Concentrations: Artificial Intelligence and Smart Devices
- Relevant coursework: Data Structures and Algorithms, Computer Organization and Programming, Machine Learning, Robotics and Perception, Object-Oriented Programming, Probability and Statistics, Discrete Mathematics, Linear Algebra, Mechanics, Electromagnetism

EXPERIENCE

College of Computing, Georgia Tech Atlanta, GA
Undergraduate Researcher *Aug 2021 - present*

- Worked on the perception dynamics of *AutoRally* self-driving car advised by Dr. James Rehg
- Implemented deep convolutional neural networks with PyTorch to classify images and detect objects
- Researched long short-term memory (LSTM) networks to predict the dynamics of the car

HiLearn Yerevan, Armenia
Research Engineer *Feb 2021 - Aug 2021*

- Helped develop AI automated financial advising application
- Researched machine learning models for long term market (stocks, bonds, funds) simulation
- Created Jupyter notebooks to investigate and compare different portfolio management techniques
- Developed APIs to integrate research results in production using Flask
- Technology stack used: Python, Scikit-learn, SciPy, PostgreSQL

PROJECTS

Mobile Application for Hikers
Individual Project advised by Dr. Frank Dellaert *Aug 2021 - Present*

- Building a mobile application in React Native to make hiking activities safer and more engaging
- Designing the user interface using Figma

Object Detection Web Application
Individual Project *Nov 2020 - Feb 2021*

- Trained an SSD neural network model to detect objects using TensorFlow Object Detection API
- Processed the images using OpenCV and NumPy
- Designed and created the back-end of the web application in Flask to display the model in real-time

Recognizing Traffic Signs
Individual Project *Sep 2020 - Oct 2020*

- Constructed the architecture of a convolutional neural network to classify traffic signs
- Implemented the neural network model using TensorFlow
- Achieved 97.5% accuracy on test data (43 different categories)

SKILLS

- **Technical** - Python, Java, C, C++, SQL, LaTeX, Git, Linux
- **Languages** - Armenian (Native), English (Fluent), Russian (Intermediate-Upper), Spanish (Intermediate)

HONORS AND AWARDS

- Faculty Honors - Fall 2021, Spring 2021, Georgia Institute of Technology
- Dean's List - Fall 2020, Georgia Institute of Technology
- Prize Winner - Team Blitz-Contest of the 4th Olympiad of Metropolises, Moscow 2019
- 2nd prize - International Youth Olympiad in Mathematics (a.k.a. Global Scholarship Competition), Higher School of Economics, Moscow 2018