

Aviel Resnick

Software Developer



EDUCATION

University of Pennsylvania, School of Engineering and Applied Science

Sept. 2020 – May 2024, Philadelphia, PA

Bachelor of Science in Engineering in Computer Science

Lower Moreland High School

Sept. 2016 – June 2020, Huntingdon Valley, PA

Rigorous STEM Oriented AP Courseload, National Merit Finalist

WORK EXPERIENCE

Software Research Intern @ NASA Langley Research Center

June 2022 – Aug. 2022 | Hampton, VA

- Produced radical improvements over industry standards in both runtime and memory usage of covering array generation for combinatorial testing.
- Worked with a team to design a Haskell wrapper and interface for the NIST covering array generator (ACTS).
- Implemented a fault-seeded Haskell test suite over an air traffic collision avoidance system for comprehensive testing.
- Increased the practical upper-bound on parameter ranges 100-fold for combinatorial black-box testing.

AI Software Engineer @ Kod*Lab (GRASP Lab)

July 2021 – May 2022 | Philadelphia, PA

- Designed and implemented a measure for robot locomotion robustness using generative adversarial networks (GANs).
- Experimented with different network architectures and loss functions to optimize multi-task performance.
- Managed a Linux server for remote training and testing of the GAN.
- Primarily utilized Python, TensorFlow, SciKit-Learn, NumPy, and Git.

Software Developer @ Children's Hospital of Philadelphia

June 2019 – Sept. 2020 | Philadelphia, PA

- Developed and shipped specialized medical image processing software in Python 3.
- Automated the morphometry of histologically stained arterial images.
- Researched the application of unsupervised learning to the segmentation of medical images.

INDEPENDENT EXPERIENCE

Software Director @ Penn Aerospace, High Altitude Balloon Team

Sept. 2020 – Present

- Developed a real-time communication interface with a high-altitude payload.
- Facilitated connectivity with an onboard sensor suite at altitudes of over 70,000 feet.
- Oversaw a sub-team focusing on processing and statistical analysis of flight data.
- Managed launch procedures and payload recovery in accordance with FAA regulation.

CONTACT INFO

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SKILLS

Programming Languages

Python3, Java, C / C++

HTML, CSS, JavaScript (ES6)

Haskell, OCaml, Bash

Libraries & Frameworks

React, NodeJS, Express, Bootstrap,

TensorFlow, NumPy, SciPy,

Scikit-Learn, PyTorch, OpenCV,

Matplotlib, Tkinter

Tools & Platforms

Git, GitHub Projects,

Heroku, MongoDB, GNU/Linux

Design

Photoshop CS6, Figma, Illustrator

SELECTED COURSES

Data Structures and Algorithms,

Software Design / Engineering,

Computer Systems,

Artificial Intelligence,

Operating Systems,

Databases and Information Systems

LANGUAGES

Fluent

English, Russian

Limited

Spanish, Hebrew