Aviel Resnick

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Science — **Philadelphia, PA**
Master of Science in Engineering in Computer Science; GPA: 3.73/4.0 — *Jan. 2023 – May 2024*

University of Pennsylvania, School of Engineering and Applied Science — **Philadelphia, PA**
Bachelor of Science in Engineering in Computer Science; GPA: 3.75/4.0 — *Sept. 2020 – May 2024*

EXPERIENCE

Brightcove Inc. — **San Francisco, CA**
Full-Stack Software Engineer — *Sept. 2024 – Present*

- Developed seamless third-party integrations that enabled AI-driven features like text-to-video generation, short-form content multiplication, advanced video editing, and robust Roles and Permissions management. These solutions were requested by a major client, whose contract alone added over $500K in annual revenue and over 1,000 new monthly active users.
- Built React front-end components and Express backend services, alongside comprehensive unit and integrations tests.
- Engineering lead for a cross-team effort to migrate Kubernetes clusters to Amazon EKS to reduce operating cost.
- Received CEO recognition award for contribution to the AI suite launch in collaboration with an Agile team.

Zenith Aerospace — **Belmont, CA**
Software Engineering Intern — *May 2023 – Aug. 2023*

- Developed a scalable full-stack (MEVN) interface for bidirectional communication with specialized high-altitude payloads.
- Embedded code across all system levels to bridge onboard firmware with ground control for aircraft-to-interface connection.
- Enhanced monitoring and debugging capabilities with real-time JavaScript visualizations, saving hours of manual calculations.

NASA Langley Research Center — **Hampton, VA**
Software Research Intern — *June 2022 – Aug. 2022*

- Developed a Haskell testing framework with 20x improved runtime and memory usage compared to existing tools.
- Engineered a novel black-box technique for combinatorial testing tools, reducing practical testing time by over 99.9%.
- Implemented a fault-seeded test suite over an air traffic collision avoidance system for comprehensive testing.
- Co-authored a paper and presented the framework (Radix Coverage) at ACM ICFP 2023.

Penn General Robotics, Automation, Sensing, & Perception Lab — **Philadelphia, PA**
AI Software Engineer — *July 2021 – May. 2022*

- Implemented a measure for robot locomotion robustness using generative adversarial networks (GANs) in Python.
- Experimented with different network architectures in TensorFlow to optimize multi-task model performance.
- Managed the administration and maintenance of a Linux server for remote training and testing of the GAN.

Children's Hospital of Philadelphia — **Philadelphia, PA**
Software Engineering Intern — *June 2019 – Sept. 2020*

- Developed Python medical image processing software that cut manual image segmentation time by 80% with 97% accuracy.
- Authored a paper showcasing the efficacy of the software in accurately segmenting Verhoeff-stained arterial images.

PUBLICATIONS

***Don't Go Down the Rabbit Hole: Reprioritizing Enumeration for Property-Based Testing*.** Segev Elazar Mittelman, Aviel Resnick, Ivan Perez, Alwyn Goodloe, and Leonidas Lampropoulos. 2023. https://doi.org/10.1145/3609026.3609730

Novel Software for Automated Morphometric Analysis of Stented Arteries. Aviel Resnick, Bahman Hooshdaran, Benjamin B. Pressly, David T. Guerrero, Ivan S. Alferiev, Michael Chorny, Robert J. Levy, Ilia Fishbein. 2020. https://doi.org/10.1101/2020.01.30.927459

SKILLS

Programming/Scripting Languages: JavaScript, TypeScript, HTML, CSS, Python 3, C / C++, Java, Haskell, OCaml, Bash
Frameworks: React, Vue 3, Tailwind, Node.js, Express.js, TensorFlow, PyTorch, OpenCV, Scikit-Learn, NumPy
Tools & Platforms: Git, Figma, Postman, MongoDB, SQL, Docker, Spinnaker, Jenkins, Jira, Selenium, GNU/Linux, Photoshop CS6