

Zachary Russell

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EDUCATION

University of Virginia

Bachelor of Science in Computer Science, May 2024

GPA: 3.80

EXPERIENCE

Embedded Software Engineer Intern | Emerson:

Jun 2022 – Aug 2022

- Developed and modified C and assembly programs used to control Emerson proprietary PLC modules
- Implemented features to allow a proprietary CPU model to validate daylight savings time
- Wrote multitude of unit tests that were added to weekly department system test suite
- Worked with team of interns to develop and deploy a live-data report dashboard at the Emerson Charlottesville headquarters

Artificial Intelligence Research Intern | University of Virginia:

May 2023 – Present

- Worked with the surrogate simulation team at UVA's AI For Science research group
- Specialized in machine learning model and backend system design

Computer Science Teaching Assistant | University of Virginia:

Aug 2022 – Jan 2023

- Helped teach students algorithms and data structures by emphasizing conceptual understanding

PROJECTS

UVA Tutor Matching Site (Django, JavaScript, PostgreSQL, Heroku)

- Implemented secure authentication via Google and UVA login options
- Developed Django models for users, schedules, and requests
- Leveraged university SIS API to pull course data
- Hosted the site through Heroku and increased aesthetic appeal with JavaScript and Bootstrap5

Recycling Image Identifier (PyTorch, Gradio)

- Implemented image classification using a ResNet50 CNN with PyTorch
- Meshed PyTorch backend together with Gradio interface to host and interact with model
- Achieved approximately 90% accuracy with test dataset of 2000+ labeled images

Personal Website (HTML/CSS, JavaScript, GitHub Pages)

- Created a personal website with HTML/CSS that is hosted through GitHub Pages

Technologies and Languages

- Python, C++, Java, C, JavaScript, SQL, HTML, CSS, MATLAB, x86 Assembly
- Git, Django, PostgreSQL, PyTorch, Scikit-learn, Unix