

# Zachary Russell

703-919-4569 | [zacharyrussell01@gmail.com](mailto:zacharyrussell01@gmail.com) | [zach-russell.github.io](https://zach-russell.github.io)

## EDUCATION

---

### University of Virginia

Bachelor of Science in Computer Science, May 2024

GPA: 3.80

## EXPERIENCE

---

### Artificial Intelligence Research Intern | UVA Biocomplexity Institute: May 2023 – Present

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

### Embedded Software Engineer Intern | Emerson: Jun 2022 – Aug 2022

- Developed 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

### Computer Science Teaching Assistant | University of Virginia: Aug 2022 – Jan 2023

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

## PROJECTS

---

### Todo Tracking App (MongoDB, Express, React, Node)

- Developed an app to track a user's todo items, including a React client, Express server & MongoDB database
- Created and styled a dynamic ReactJS webpage that fetches from the database and can send back new or augmented data
- Included a user authentication feature using signed JsonWebTokens

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

- 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

## Technologies and Languages

---

- Python, C++, Java, C, JavaScript, HTML, CSS, MATLAB, x86 Assembly
- Git, React, Express, MongoDB, Django, PostgreSQL, PyTorch, Unix