

Barrett Ruth

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EDUCATION

University of Virginia

Bachelor's of Computer Science

Charlottesville, VA

Aug. 2022 – May 2026

- **Coursework:** Advanced Algorithms, Operating Systems, Algorithmic Economics GPA: 3.99/4
- **Activities:** ICPC, theCourseForum, Cavalier Autonomous Racing, HooHacks 2x Winner

EXPERIENCE

DRW

Software Developer Intern

June – August 2025

Houston, TX

- Incoming on Commodities Team

Ramp

Backend Software Engineering Intern

September – December 2025

New York City, NY

- Incoming on AI Tooling Team

UVA Insight Computer Architecture Lab

Hardware Profiling Research Assistant

January – May 2025

Charlottesville, VA

- Profiling NVIDIA GH200 Superchip

TRB Capital Management

Software Engineering Intern

May – August 2024

Charlottesville, VA

- Developed frameworks and algorithms for medium-frequency trading application with TWS API
- Implemented SWIG backtesting, CI with Catch2/gcov, and strategy deployment

VISA

Software Engineering Intern

May – August 2024

Austin, TX

- Piloted “GenAI Support Assist,” automating resolution of global authentication support issues, reducing team’s weekly debugging time by 8 hours and selected by Senior VP of Payment Solutions
- Sole intern to deploy to internal cloud platform CloudView, utilizing GenAI APIs (Ada-002, GPT) to poll real-time production data, storing embeddings/logs in VectorDB/MySQL, and authenticated frontend for support staff

Nth Venture Studio

Data & AI Intern

February – August 2023

Austin, TX

- Implemented technical MVP for CERTD (employee upskilling seed startup)

PROJECTS

Cavalier Autonomous Racing | ROS, C++, CMake

April 2024 – Present

- Refactored state machine to handle emergency racing scenarios using ROS2 and in-house YAML validator
- Migrated GUI to Qt C++, increasing data throughput by 25% enabling asynchronous monitoring of car metrics

theCourseForum | Django, PostgreSQL, JQuery, AWS

August 2022 – May 2025

- President of #1 university course review and grade analytics platform serving 20,000+ students (85% student body)
- Implemented trigram/reverse-indexing search algorithm supplanting Elasticsearch, saving \$150/mo

none-ls | C, Lua, Plenary

- Core maintainer of NeoVim’s largest (2.9k+ stars, 10k users) LSP integration framework

guard | Lua, libuv, busted

- Developed first NeoVim asynchronous formatting and linting utility (6k users) with Lua coroutines

TECHNICAL SKILLS

Languages: Python, C, C++, Java, JavaScript, TypeScript, HTML/CSS, SQL, Lua, Shell, Bash

Technologies/Frameworks: React, Node.js, Next.js, Git, Docker, AWS, GCP, Redis, Protobuf, Jenkins