

Barrett Ruth

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EDUCATION

University of Virginia

May 2026

Bachelor's of Computer Science, Economics

Charlottesville, VA

GPA: 4.00/4.00

- **Academic Distinctions:** Dean's List (F22—S24), \$80,000 Merit Scholarship Recipient
- **Clubs & Activities:** ICPC, theCourseForum, Cavalier Autonomous Racing, HooHacks 2x Winner
- **Coursework:** Data Structures, Advanced Algorithms, Operating Systems, Algorithmic Economics, Econometrics

EXPERIENCE

Hardware Profiling Research Assistant | *Insight Computer Architecture Lab*

January 2025—Present

- Profiling NVIDIA GH200 superchip

DRW | *Software Developer Intern*

June—August 2025

- Incoming on Commodities Team

Ramp | *Backend Software Engineering Intern*

September—December 2025

- Incoming on AI Tooling

VISA | *Software Engineering Intern*

May—August 2024

- 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

TRB Capital Management | *Software Intern*

May—August 2024

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

UVA Department of Computer Science | *Undergraduate Research Assistant*

January—May 2024

- Published analysis of auto-grading technologies based on global primary survey data to SIGCSE Technical Symposium

Nth Venture Studio | *Data & AI Intern*

February—August 2023

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

GoTransverse | *Software Engineer*

August 2020—February 2022

- Developed full-stack billing management applications part-time (COVID)

EXTRACURRICULARS

theCourseForum

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

Cavalier Autonomous Racing

April 2024—April 2025

- 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% and enabling asynchronous monitoring of car metrics

PROJECTS

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 stars) with Lua coroutines

TECHNICAL SKILLS

- **Languages:** Python, C, C++, Java, JavaScript, TypeScript, HTML/CSS, SQL, Lua, Shell, Bash, R
- **Technologies/Frameworks:** React, Node.js, Next.js, Git, Docker, AWS, GCP, Redis, Protobuf, Jenkins