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Colby J. Ryan

Software Engineer

[Github](#)
[LinkedIn](#)
[Personal Website](#)

EXPERIENCE

Panoramix Financial, *Software Engineer*

August 2024-Present

- Led development and implementation of FacetAI, announced at the [T3 conference](#) and now live
- Developed and maintained full-stack financial applications using C#, .NET, ASP.NET Core, SQL Server, and modern web technologies
- Engineered a nearest-neighbor search system for embedded text retrieval using multivector calculus to improve response precision
- Built a Retrieval Augmented Generation bot from our documentation to assist our clients
- Created user-query tracking in a SQL database to understand common user errors
- Built a page for users to create and edit various investment models, investment information types, asset classes, asset types, user defined fields, etc.

PanAgora Asset Management, *Data Science Intern*

Summer 2023

- Wrote python scripts to connect to FBI API, extract, transform, and load data into a SQL server for Portfolio Manager
- Reformed daily data diagnostic email tracking security performances into web page

TandemAI, *Software Engineer Intern*

Summer 2022

- Created flexible scripts to test storage bandwidth and latency, graphed results in matplotlib

EDUCATION

Union College, Schenectady, NY

September 2020- June 2024

- B.S. in Computer Science and Mathematics (Double Major)
- Elected Class Vice President, Theta Delta Chi Social Chair, Philosophy Club Member

TEFL Iberia, Barcelona, Spain

September 2019-March 2020

- Taught private English classes of all levels part time, learned conversational Spanish

PROJECTS

Mello Life

[Link](#)

- Built and launched Mello, a gamified habit-tracking and productivity app with daily challenges and streak-based rewards, developing the full stack from scratch using React Native, TypeScript, Supabase, and RevenueCat

Mathematica

[Link](#)

- Designed, built, and deployed a math-based iOS app, handling the entire codebase infrastructure and publishing process independently on the App Store

Mathematics Thesis

[Link](#)

- Investigated properties, theorems, and structures of hypergraphs, an extension of graph theory where edges may link multiple vertices simultaneously

Computer Science Thesis

[Link](#)

- Compared two leading chess engines on how they evaluated intricately designed chess positions