ANDREW C. PHOTINAKIS

Email || LinkedIn || GitHub || Website

OBJECTIVE

Passionate and results-driven 4th-year student at Rochester Institute of Technology, seeking a Software Engineering internship. Eager to apply my combined expertise in Computer Science and Finance to develop solutions to impactful problems. Available for May 2025 – August 2025.

EDUCATION

Rochester Institute of Technology (RIT) — **Rochester, NY**

Bachelor of Science in Computer Science (May 2026) — Fall 2021 – Spring 2026

Minor in Finance (*) – Taking course Fall 2024

- Awards/Honors: Dean's List Spring '22, Fall '22, Fall '23 & RIT Presidential Scholar
- Computer Science Coursework: Intro to Artificial Intelligence*, Machine Learning*, Principles of Data Mining*, Concepts of Computer Systems, Concepts of Parallel & Distributed Systems, Principles of Data Management, Intro to Software Engineering, Analysis of Algorithms, Mechanics of Programming, Intro to CS Theory, Discrete Mathematics for Computing
- Finance/Economics Coursework: Algorithmic Trading*, Financial Management II*, Intro to Options & Futures*, Financial Management I, Financial Accounting, Principles of Microeconomics
- Organizations/Clubs: Computer Science Community, Financial Management Association, Intramural Soccer
- RIT Employment: Calculus Teaching Assistant (August 2022 – January 2023)

WORK EXPERIENCE

TechSource, Inc. — **Germantown, MD**

IT Software Engineering Co-op – (**Azure Functions, Java, SQL, Azure Data Factory, Git, Swagger, SOAP API, React**) January 2023 – Present

- Lead the creation of a fully automated exchange **Data Pipeline** in **Java** using **Azure Function Apps**, reducing original execution time by **98%**, resulting in significantly faster processing, increased accuracy, enhanced flexibility, & lower costs.
- Utilized **Swagger APIs**, **SOAP APIs**, **Java Libraries**, & **OOP Programming** principles for data manipulation, cleaning, & extraction, achieving a **99% accuracy** in data transfer while ensuring modular, maintainable code with dynamic flexibility.
- Leveraged **TypeScript**, **TailwindCSS**, & **NextJS** to create reusable & responsive UI components for the U.S. Department of Energy's **Generative AI Model** using **GPT-4**, enhancing UI flexibility & increasing user satisfaction & performance.
- Developed an automated reporting system using **Power Automate Flows** & **Java Excel Libraries**, which generates detailed daily reports on data pipeline executions & sends them to high-level business teams, resulting in efficient tracking of data exchange.

Herrick Technology Laboratories (HTL) — **Germantown, MD**

Software Engineering Co-op – (**C++**, **Git**, **REST API**, **Angular, TypeScript**, **XML**, **CMake**, **Bash, DLL**) May 2023 – August 2023

- Accomplished seamless integration between HTL radios & third-party software by collaborating closely with industry professionals & a third-party company, developing a dynamic linking library using **Boost C++** libraries & **DLL** interfaces.
- Optimized information flow between systems by enhancing collaborative software development skills, leading to the design & implementation of the dynamic linking library, which improved data capture & **Vita49** stream generation through the software interface.
- Elevated UI testing efficiency by creating **Selenium**-based automation scripts in **Python** using the **PyTest** framework, ensuring the functionality & usability of various HTL integrated services.
- Ensured accurate network packet transmission & reception by utilizing **Wireshark** for hardware testing on radio devices, contributing to protocol analysis & validation.

PROJECTS

TradeSync — **Darnestown, MD**

Personal Project – (**Java, Spring Boot, OOP, Multithreading, RESTful APIs, JavaScript Libraries, TailwindCSS)** July 2024 – Present

- Built a full-stack trading simulator by integrating real/past-time data processing, strategy backtesting, & network programming, resulting in a competitive & collaborative environment, with a scalable **PostgreSQL** database for managing user data & historical equity prices.
- Created a robust backend using **Java Spring Boot**, **multithreading**, & **WebSocket Protocols**, resulting in a dynamic & low-cohesion API for accurate data transmission, supporting strategy backtesting, concurrent trading operations, & seamless communication with the UI.
- Developed an interactive & responsive UI using **React**, **TypeScript**, & **TailwindCSS**, displaying features including trade history display, account balance tracking, chart drawing tools, & technical indicators, resulting in enhanced user engagement & data visualization capabilities for comprehensive analysis.

WebFinvizAPI — **Rochester, NY**

Personal Project – (**Java**, **Spring**, **JUnit**, **JSoup**, **Postman**, **Git**, **JWT**, **MVVM**, **REST API**, **JSON**, **NoSQL)** August 2023 – December 2023

- Engineered a flexible **MVVM** architecture in developing a sophisticated **RESTful API** using **Spring Boot**, **Java**, & **Maven**, achieving efficient financial data retrieval from Finviz.com by incorporating **JSoup** for advanced web scraping. Facilitated efficient data storage in **JSON** files, setting the groundwork for seamless **NoSQL** database integration.
- Validated API endpoints with **JUnit** testing to ensure precise data extraction, transformation, & storage processes, enhancing overall data accuracy & functionality.
- Strengthened API security & access control by implementing **JSON Web Tokens** for enhanced user authentication & authorization, while integrating advanced rate limiting mechanisms to ensure responsible web scraping & adherence to Finviz.com's usage policies.

SKILLS & LANGUAGES (EXCLUDING PROJECTS & WORK EXPERIENCE)

- Tools & Technologies: Visual Studio Code, MongoDB, JetBrains IDEs, Visual Studio C++, Docker, JUnit, Postman
- Skills: Object-Oriented Programming, Web Development, Project Management, Problem Solving, Critical Thinking