ANDREW C. PHOTINAKIS

Washington, D.C. || andrewcphotinakis@gmail.com || https://www.linkedin.com/in/andrew-photinakis/ ||| https://github.com/acphotinakis

OBJECTIVE

Computer Science & Finance student (BS/MS) at RIT graduating December 2026, with concentrations in AI, machine learning, and distributed systems. Available Summer – December 2026 and seeking a Software Engineering Internship to apply experience in scalable systems, cloud platforms, and AI-driven applications to deliver impactful, high-performance solutions.

EDUCATION

Rochester Institute of Technology — **Rochester, NY**

Master of Science in Computer Science — *Expected December 2026*
Bachelor of Science in Computer Science — *Expected December 2025*
Minor in Finance

- Awards/Honors: RIT Presidential Scholar & Dean's List
- Organizations/Clubs: Computer Science Community, Financial Management Association, Intramural Soccer
- RIT Employment: Calculus Teaching Assistant (August 2022 – January 2023)

SKILLS & LANGUAGES

- **Languages:** Java, C, C#, C++, Python, TypeScript, SQL, Bash
- **Frameworks & Libraries:** Spring Boot, .NET Core, React, Angular, Next.js, TailwindCSS, Maven, JUnit, PyTest, Selenium
- **Cloud Platforms & Tools:** Azure Functions, Azure Data Factory, Google Cloud Platform, Power Automate,
- **Databases:** PostgreSQL, MongoDB, BigQuery
- **AI/ML & Data Science:** Vertex AI, Generative AI, Reinforcement Learning

WORK EXPERIENCE

Software Engineer & Cyber Risk Consulting Intern | *PricewaterhouseCoopers (PwC)* — *June 2025 – August 2025*

- Accelerated **AI-driven document processing pipeline by 2x** through consolidating **Python** and **.NET** workflows into a unified **C# (.NET Core)** system, improving reliability and maintainability for **LLM orchestration and YAML validation**.
- Boosted dashboard refresh speed and accuracy by designing a modular **Angular** frontend integrated with **Node.js** and **BigQuery**, enabling real-time metric visualizations in **Google Cloud Console** for faster business insights.
- Reduced manual setup time by **90%** with a cross-platform **Avalonia UI** automation tool and cut **Vertex AI** YAML hallucinations by **80%** by implementing robust **prompt-safe schema constraints**, enhancing overall system stability and user trust.

Software Engineering Co-op | *TechSource, Inc.* — *January 2023 – Present*

- Led development of a fully automated **Java** data pipeline on **Azure Function Apps**, slashing execution time by **98%,** improving data accuracy and flexibility, reducing operational costs, and automating daily execution reports sent to business stakeholders, enhancing transparency and operational oversight.
- Integrated **Swagger** and **SOAP APIs** with modular **Java** libraries to achieve **99%** data transfer accuracy and streamline complex data extraction and transformation workflows, enabling more reliable downstream analytics.
- Created reusable, responsive UI components with **TypeScript**, **TailwindCSS**, and **Next.js** for the U.S. Department of Energy's **GPT-4-powered AI platform**, enhancing user experience and boosting frontend performance.

Software Engineering Co-op | *Herrick Technology Laboratories* — *May 2023 – August 2023*

- Developed a dynamic linking library using **Boost C++** and **DLL** interfaces to integrate HTL radios with third-party software, improving **Vita49 stream generation** and data capture reliability by **50%**, enabling more robust real-time radio communications.
- Optimized cross-system data flow and reduced integration errors by refining radio-software interface protocols and collaborating with industry partners, resulting in smoother data transmission and enhanced system stability.
- Automated functional and regression UI testing using **Selenium** and **PyTest**, increasing testing efficiency by **80%** and ensuring consistent service reliability across integrated HTL applications.

PROJECTS

TradeSync | *Next.js, TailwindCSS, ReCharts/D3, Node.js, WebSocket Server, Python, FastAPI, Supabase* — *August 2025 – Present*

- Architecting a scalable trading simulator processing real-time and historical data with **millisecond latency**, enabling users to backtest high-frequency strategies and collaborate in dynamic trading rooms.
- Developing **AI-driven strategy recommendations** and **reinforcement learning models** that adapt to market conditions, boosting user portfolio performance and risk management.
- Implementing ultra-low latency backend and **WebSocket communication** to support thousands of concurrent trades with real-time profit/loss updates and seamless UI responsiveness.
- Delivering advanced, interactive visualizations with real-time **sentiment analysis** and **explainable AI insights**, enhancing user decision-making and engagement.

WebFinvizAPI | *Java, Spring Boot, JUnit, JSoup, Maven, JSON, JWT, REST API, NoSQL* — *August 2023 – August 2024*

- Built a **RESTful API** with a modular **MVVM** architecture to enable efficient financial data retrieval from Finviz.com, leveraging **JSoup** for advanced web scraping and structured **JSON** data storage.
- Ensured reliability and accuracy of extracted financial datasets by designing comprehensive **JUnit** test coverage for **API** endpoints, transformation logic, and persistence layers.
- Enhanced security and compliance by integrating **JWT**-based authentication/authorization and implementing robust rate limiting, ensuring responsible usage and adherence to Finviz.com's access policies.