

Timothy Liakh

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EDUCATION

Rensselaer Polytechnic Institute

Troy, NY

Bachelor of Science in Computer Science (GPA: 3.79 / 4.00)

May 2026

Coursework: Data Structures, Algorithms, Web Development, Database Systems, Computer Organization, ML & Data Mining

WORK EXPERIENCE

WebstaurantStore

May 2024 - August 2024

Junior Software Engineer - C#, Blazor, SQL, Agile Development (Scrum)

- Developed a new ASP.NET service in C# to intercept and suppress redundant alerts, reducing operational costs by 90% and eliminating over 50,000 weekly Sentry alerts, resulting in substantial savings under the pay-per-alert model.
- Created an optimized SQL procedure to retrieve 1,000,000+ customer shipping reports with integrated filtering, reducing load times by 5%, integrating with a dynamic frontend using Blazor and Kendo UI for enhanced data visualization.
- Modified MediatR API endpoints to incorporate filtering during SQL data retrieval, resulting in a 10% reduction in load times and doubling publicly accessible warehouse data.

Grid Protection Alliance

May 2023 - May 2024

Software Engineering Intern - C#, .NET, React, TypeScript, SQL

- Spearheaded a new Grafana data source plugin using React and TypeScript to simultaneously process over 750,000 phasor data points and created 30+ custom functions for advanced analysis and faulty phasor detection.
- Engineered a backend in C# with .NET RESTful API calls to retrieve data from multiple SQL tables, enabling on-retrieval function modification and reducing data analysis wait times by 15%.

PROJECT EXPERIENCE

CartX - Project Lead

September 2023 - Present

JavaScript, React, Express JS, Python, Selenium, MongoDB

- Providing leadership to 6 students on a cost-optimizing shopping app through a React frontend, Node JS backend, web scraping with Python's Selenium and data storage in MongoDB, achieving up to 15% reduction in user shopping time.
- Architecting and developing backend API routes using Express.js, including custom routes for nearby store location lookups and an algorithm that queries over 5,000 items from five stores in MongoDB to group cross-store items by similarity.
- Automating scraping and normalization with Python Selenium, scheduling runs with cron jobs and storing data in MongoDB.

EcoVISION - Hack RPI Best AI Hack Winner

February 2024

Python, Flask, React, OpenCV, OpenAI

- Built a React-based web application with a Flask backend to identify recyclables from images and videos, achieving 95% classification accuracy and using Open AI to provide actionable insights for waste sorting and sustainability practices.
- Integrated OpenCV and AI-driven recognition models to analyze conveyor belt footage, increasing sorting efficiency by 20% in simulated environments.

Finance For All - 1st Place SHPE-NSBE Hackathon

February 2024

JavaScript, React, Express JS, Google Gemini

- Built a platform with React and Express.js that leverages AI to simplify bank comparisons for tasks such as account openings, credit cards, and loan interest rates, reducing user research time by 5-10 hours and increasing efficiency by 30%.
- Integrated Google Gemini, to create a responsive chatbot and data collection on banking options to aid financial literacy.

EXTRACURRICULAR

Coordinator, Rensselaer Center for Open Source

August 2024 - Present

- Overseeing a group of 500+ students spanning 120+ different open source projects, focusing on innovation and improvement.
- Work closely with 30+ mentors and provide hands on experience through guiding 40+ topic specific workshops.
- Collaborating with external companies like IBM, Red Hat and Microsoft to provide students with real world experience.

President, Slavic Student Association – Founded and leading a cultural club celebrating Slavic heritage and fostering community.

Representative, Team RPI - Represent and organize RPI's Rocket League teams, coordinating players and competing in tournaments.

SKILLS & LANGUAGES

Programming Languages: C#, Python, JavaScript, TypeScript, C++, C, Java, PHP, HTML, R, Bash, Verilog

Technologies & Libraries: ASP.NET, Blazor, Razor, React, NodeJS, Express.js, Selenium, PyTorch, Azure DevOps, Docker

Databases & Tools: SQL, MongoDB, Firebase, GitHub, Git, Jira, Linux, Postman, Visual Studio, Coder, JSON