

# Romerico David Jr.

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## EDUCATION

### Towson University

Towson, MD

*Bachelor of Science in Computer Science (3.95 GPA), Minor in Mathematics*

May 2026

- **Coursework:** Object-Oriented Design and Programming, Software Quality Assurance and Testing, Web App Development, iOS App Development, Machine Learning, Calculus III, Ordinary Differential Equations, Linear Algebra, Discrete Math, Statistical Methods

## TECHNICAL SKILLS

**Programming Languages:** TypeScript, JavaScript (Node.js), Python, Java, Swift, C++, HTML, CSS, LaTeX

**Frameworks/Technologies:** React, Angular, Express, MongoDB, Mongoose, Jest, Supertest, Tailwind, Bootstrap

**Developer Tools:** Visual Studio Code, Git, GitHub, Postman, Docker, CircleCI, AWS

## EXPERIENCES

### Uber

San Francisco, CA

*Software Engineering Intern*

Nov 2024 to Present

- Incoming Summer 2025

### SecurEd Inc.

Towson, MD

*Junior Software Developer*

Aug 2024 to Present

- Advancing cybersecurity education by developing CLARK, CARD, and Cyber Competencies—platforms serving 14,000+ active users and facilitating 56,000+ curricula downloads
- Developing and maintaining scalable RESTful APIs and a web application using the MEAN stack
- Writing extensive unit and end-to-end tests using Jest and Supertest
- Develop Python scripts to efficiently query and manipulate data for development and production environments
- Applying Agile methodologies and practices through sprints, standups, and retrospectives
- Leveraging Git and GitHub for version control, ensuring efficient team collaboration

### Towson University

Towson, MD

*Computer Science Peer Tutor*

Feb 2024 to Dec 2024

- Provided drop-in tutoring up to 250 students every semester in Java, Python, and C++
- Assisted students with understanding the concepts and principles in data structures, algorithms, structured, procedural and object-oriented programming

### Towson University

Towson, MD

*Undergraduate Researcher in Federated Learning*

Aug 2023 to Jan 2024

- Conducted research on model poisoning in Federated Learning under Dr. Weixian Liao, contributing to the understanding of security vulnerabilities in FL systems
- Utilized the Flower Federated Learning (FL) framework (TensorFlow) to conduct experiments of vulnerabilities to model poisoning attacks in federated learning
- Compared FL aggregation methods FedAvg, FedProx, and QffedAvg across varying types of model poisoning attacks during data processing and model training

### Towson University

Towson, MD

*Research Intern*

June 2023 to July 2023

- 1 of 12 students chosen for the TIGURS summer undergraduate research program
- Utilized PyTorch, NumPy, pandas, Matplotlib, and scikit-learn to simulate feed-forward, convolutional, and recurrent neural networks using the MNIST and CIFAR-10 datasets
- Evaluated experiments based on Accuracy, Confusion Matrix, Precision, and Recall

## PROJECTS

### Towson Academic Pathway

Sept 2024 to Dec 2024

- Developed a web application using the MERN stack and Tailwind CSS to streamline and ease the academic planning process for Towson University students
- Integrated the OpenAI API to generate personalized degree plans tailored to student preferences
- Applied best software engineering practices like continuous integration with CircleCI and interface-driven design

### nVolve

Sept 2024 to Dec 2024

- Developed an iOS app in Swift to enhance student engagement with Towson University campus events
- Utilized Alamofire to fetch event data from API endpoints
- Integrated an interactive campus map to display real-time event markers using MapKit and CoreLocation
- Implemented local push notifications to keep students updated on upcoming events

### Nonlinear ODEs and Linear PDEs Equivalence Project

March 2024 to May 2024

- Researched the equivalence between nonlinear ordinary differential equations and linear partial differential equations in fluid dynamics
- Utilized Python frameworks such as NumPy, SciPy, and Matplotlib for simulation and visualizations
- Developed papers and presentations using LaTeX and Microsoft PowerPoint