# Romerico David Jr.

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## **EDUCATION**

## **Towson University**

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

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

Software Engineering Intern

Incoming Summer 2025

#### SecurEd Inc.

Junior Software Developer

- Advancing cybersecurity education by developing CLARK, CARD, and Cyber Competencies—platforms serving 14,000+ active users and facilitating 56,000+ curricula downloads
- Building 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
- Creating Python scripts that 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**

Computer Science Peer Tutor

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**

Undergraduate Researcher in Federated Learning

- 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 OffedAvg across varying types of model poisoning attacks during data processing and model training

#### **Towson University**

Research Intern

- 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**

- 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 ٠ 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

Towson, MD Feb 2024 to Dec 2024

San Francisco, CA Nov 2024 to Present

Aug 2024 to Present

Towson, MD

Towson, MD

May 2026

Towson, MD

Aug 2023 to Jan 2024

Towson, MD

June 2023 to July 2023

Sept 2024 to Dec 2024