Romerico David Jr.

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Education

Towson University Towson, MD

Bachelor of Science in Computer Science, Minor in Mathematics, 3.94 GPA *May 2026*

- **Coursework:** Data Structures and Algorithms, IOS App Development, Object-Oriented Design and Programming, Software Engineering, Web App Development, Calculus III, Linear Algebra, Ordinary Differential Equations, Statistical Methods

Technical Skills

Languages: Java, Python, C++, HTML, CSS, JavaScript (Node.js), TypeScript, JSX/TSX, LaTex
Frameworks/Libraries: Express.js, React.js, Angular, MongoDB, Bootstrap, NumPy, Matplotlib, pandas
Databases: MongoDB
Developer Tools: Visual Studio Code, Anaconda, Jupyter Notebook, Git, GitHub

Experience

Junior Software Developer Aug 2024 – Present

SecurEd Inc. *Towson, MD*

- Redesign CLARK and Cyber Competencies products, boosting user engagement and platform usability for 14,000+ active users
- Optimize database operations by creating data pipelines in MongoDB and Python, enhancing efficiency for 1,701 learning objects and 1,044 organizations
- Develop unit and end-to-end tests for HTTP requests, improving platform stability and reducing bugs
- Build and maintain scalable RESTful APIs using MEAN stack, supporting a web application with 56,000+ downloads
- Collaborate in Agile sprints, refining project timelines and code quality
- Utilize GitHub for version control, ensuring high code quality and efficient team collaboration

Computer Science Peer Tutor Feb 2024 – Present

Towson University *Towson, MD*

- Provide drop-in tutoring up to 250 students every semester in Java, Python, and C++
- Assist students with understanding concepts in data structures, algorithms, structured and object-oriented programming

Undergraduate Researcher in Federated Learning Aug 2023 – Jan 2024

Towson University *Towson, MD*

- Leveraged Flower FL framework (TensorFlow) to conduct experiments
- Compared FL aggregation methods FedAvg, FedProx, and QffedAvg across varying types of model poisoning attacks during data processing and model training

Research Intern June 2023 – July 2023

Towson University *Towson, MD*

- 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

TU Campus Inquiry Project | *MEAN Stack, Bootstrap, Nodemailer* June 2024 – Present

- Developing a full-stack web application featuring a REST API to facilitate student requests and connect them with Towson University counselors
- Utilizing the MEAN stack, Bootstrap, and Nodemailer to enhance email functionality
- Implementing secure authorization using Auth0

Personal Portfolio | *React.js, TypeScript, Bootstrap* July 2024

- Developed a personal portfolio website using React.js, and TypeScript
- Styled the website using Bootstrap and Vanilla CSS

Nonlinear ODEs and Linear PDEs Equivalence Project | *Python, NumPy, SciPy, Matplotlib* March 2024 – May 2024

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