Romerico David Jr.

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EDUCATION

Bachelor of Science in Computer Science (3.94 GPA), *Towson University, Towson MD* May 2026

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

TECHNICAL SKILLS

Programming 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

EXPERIENCES

Towson University Towson, MD
Computer Science Peer Tutor Feb 2024 to present

- Provide drop-in tutoring up to 10 students every session in Java, Python, and C++
- Assist students with understanding the concepts and principles in data structures, algorithms, structured and object-oriented programming

Towson University Towson, MD
Undergraduate Researcher in Federated Learning Aug 2023 to Jan 2024

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

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

TU Campus Inquiry Project June 2024 to 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 July 2024

- Developed a personal portfolio website using React.js and TypeScript JSX (TSX)
- Styled the website using Bootstrap and Vanilla CSS

Murder Mystery Interactive Storyline Project May 2024

- Developed a text-based interactive game to solve a murder mystery, incorporating evidence collection and clue investigation
- Utilized Java to create the game, emphasizing object-oriented programming principles: Abstraction, Encapsulation, Inheritance, and Polymorphism

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 and frameworks such as NumPy, SciPy, and Matplotlib for simulation and visualizations
- Developed papers and presentations using LaTex and Microsoft PowerPoint

INVOLVEMENT

St. Francis Neighborhood Center Baltimore, MD
Tutor Volunteer Oct 2023 to Jan 2024

- Tutored 3rd grade students in math and reading
- Promoted a passion for learning to contribute to the educational and personal growth of the student

Towson University Towson, MD

- *Member, Software Engineering Club* Sept 2022 to present
- *Member, Filipino Cultural Association at Towson University* Jan 2023 to present