

John Ross

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Education

University of Texas-Rio Grande Valley, Edinburg, TX

Bachelor of Science in Computer Science

G.P.A-3.71

Aug. 2023 – May. 2025

Lone Star College, Houston, TX

Associate's in Liberal Arts

GPA-3.1

Aug. 2022 – May 2023

Relevant Coursework: Data Structures & Algorithms, Computer Architecture, Database Design, Programming fundamentals, Object-Oriented Programming in Python, Programming in Unix/Linux, Systems Programming

Technical Skills

Languages: C++, Python, SQL, Java, C#, JavaScript, HTML/CSS, MatLab, Rust, Haskell, Ada,

Frameworks: Django, React, Node.js, Express, Flask, JUnit, WordPress, Material-UI, FastAPI

Machine Learning & AI: PyTorch, TensorFlow, OpenCV, NumPy, Scikit-Learn, MONAI, U-NET

Student clubs: IEEE(Institute of Electrical and Electronics Engineers)

- IEEE Xtreme 18.0 Global Programming Competition, Ranked 12th in the United States.
- Competed in a 24-hour global hackathon, solving complex programming challenges as part of “The Bits” team.

Experience

DSV- Los Indios, TX, General Warehouse Associate | July 2024-September 2024

- Operate forklifts and pallet jacks to move inventory and maintain organized storage areas.
- Assist in unloading trucks, receiving shipments, and updating inventory records.

Senture, LLC – McAllen, TX Help Desk Tech | August 2023 – January 2024

- Provided technical support to clients, resolving hardware and software issues.
- Assisted in troubleshooting network problems and setting up new workstations.
- Documented support requests and resolutions to improve future service.

Projects

AI-Driven Skin Lesion Segmentation

Tech Stack: Python, PyTorch, MONAI, Weights & Biases, OpenCV, NumPy, SLURM HPC

- Engineered and trained multiple deep learning architectures (U-Net, Transformer-based UNet, and Mamba-based UNet V2) for automated segmentation of skin lesions using the ISIC Archive dataset.
- Optimized segmentation performance using Dice Loss and Dice Metric; implemented learning rate schedulers and deep supervision to boost convergence.
- Consistent validation Dice scores above 0.90; best-performing models exceeded 95% Dice score on validation data.

Stock Trading Application (Similar to Robinhood)

Tech Stack: C++, React, Node.js, Express, MongoDB

- Integrated Alpaca API for real-time stock price updates, historical analysis, and trading functionalities.
- Implemented core trading logic in C++, optimizing performance and execution speed for financial transactions.
- Built and managed user authentication, portfolio management, and transaction history tracking.

Expense Tracker Application

Tech Stack: Django, Python, SQLite, JavaScript, HTML/CSS

- Developed a personal finance web application enabling users to track income, expenses, and monthly budgets.
- Implemented secure user authentication with email verification, allowing users to register, verify via email, and log in.
- Enhanced security by utilizing environment variables to hide sensitive credentials (e.g., SMTP and secret keys).