Yisak Tolla

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EDUCATION

George Mason University *Fairfax, VA*
Bachelor of Science, Computer Science *Expected December 2025*

- GPA: **3.82/4.0** — *Dean's List, Tech Talent*
- Coursework: Software Engineering, Databases, Networking, Operating Systems, Artificial Intelligence, Data Mining, Computer Systems and Programming, Data Structures & Algorithms, Low Level Programming, and Linear Algebra.

TECHNICAL SKILLS

Programming Languages: Python, Java, C, JavaScript, SQL, Rust, HTML/CSS
Frameworks: React, Node.js, Express.js, JUnit, JDBC
Developer Tools: Git, Linux, MongoDB, SQLLite, Kaggle

EXPERIENCE

Purgeon *Fairfax, VA*
Software Engineer *October 2024 – Present*

- Developed feature creation at Purgeon, an AI-powered disk optimization desktop application, leveraging React, Python, and Rust, reclaiming up to 20GB of space and enhancing system performance through categorization of 1k+ files.
- Fine-tuned Ollama models to accurately prioritize files for moving and cleanup based on user-defined criteria.
- Collaborated with a team of 6 engineers to refine AI algorithms and design an intuitive, easy-to-use dashboard.

George Mason University - College of Computing *Fairfax, VA*
Undergraduate Teaching Assistant - Java & C

- Led weekly hands-on programming labs and office hours, mentoring over 300 students in fundamental concepts in C and Java such as memory management, object oriented design, and process execution, leading to >85% pass rate every semester.
- Conducted 10+ exam review sessions on major course material to over 50+ students addressing common challenges and key points resulting in an 80% of students reporting increased understanding after the session.

PROJECTS

Heart Disease Predictor | Python, JavaScript, HTML/CSS

- Preprocessed a public health dataset from Kaggle with over 1,300 entries by addressing missing values, outliers, and inconsistencies, delivering a clean, well-structured dataset for heart risk analysis.
- Implemented and trained a KNN algorithm with Python iteratively to obtain the underlying patterns in the features, resulting in 92% accuracy of the model.
- Designed and developed a user-friendly interface for entering patient health data using HTML, CSS, and JavaScript. Designed and styled the website to enhance user experience.

Snake Game | Rust, Kernel

- Built Snake in Rust using the opengl_graphics, Glutin_WIndow, and Piston crates to create the GUI and event handlers
- Optimized game performance by implementing 125ms interval updates, resulting in controlled execution timing
- Developed rendering pipeline with O(n) efficiency for snake segments while maintaining O(1) operations for core game mechanics

Buffer Management System | C, Linux

- Developed forking mechanisms using process creation techniques, resulting in optimized resource utilization and improved system performance.
- Integrated signal handling mechanisms using asynchronous event management tools, resulting in enhanced system stability and reliability.
- Implemented UNIX file handling functionalities using system calls and file descriptors, resulting in seamless file input/output operations and reliable data persistence.