Brandon Jose Tenorio Noguera

Software Engineer
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EDUCATION

University of Maryland, Baltimore County (UMBC) — **Baltimore, MD**
Bachelor of Science in Computer Science — *December 2024*
Coursework: Data Structures, Advanced C++, Design & Analysis of Algorithms, Software Engineering I

Montgomery College — **Rockville, MD**
Associate of Arts in Computer Science — *August 2018 – May 2022*
Awards: Dean's List

PROJECTS

Chess Engine with Bitboard Optimization | C, Linux
Designed and implemented a chess engine to study algorithmic optimization and data representation. Used 64-bit bitboards and magic hashing to generate over 500,000 positions per second. Precomputed sliding-piece attacks using attack tables for instant move generation. Developed a Forsyth–Edwards Notation parser with castling and en-passant support, reaching 98% legal move coverage.

Linux Kernel IPC System | C, Kernel Development
Built a custom message-passing system for Linux kernel space as an academic OS enhancement project. Implemented nine syscalls using mutex-protected, BST-backed queues. Achieved zero-copy inter-process communication with full user-space validation ensuring no crashes in over 10,000 tests.

Breast Cancer Classifier | Python, Scikit-learn
Built a machine learning classifier to predict breast cancer outcomes from real medical datasets. Tuned a Random Forest model to reach 98.25% accuracy and reduced out-of-bag error to 3.32% using grid search and cross-validation.

Doopie (Duplicate File Finder) | Python, File I/O
Created a utility to find duplicate files for personal system cleanup and performance. Designed a two-pass hashing system (file size followed by SHA-256) to reduce comparison overhead by 40%. Efficiently processed 10,000+ files in under 60 seconds while respecting file permissions.

Pogocal (Pokemon Go Calendar Automation tool) | Python, Google Calendar API, Selenium
Created a personal automation tool that scraped Pokémon GO event data from LeekDuck.com and synced it to a dedicated Google Calendar, helping users track 100+ game events per year. Used Selenium for dynamic content parsing, BeautifulSoup for HTML extraction, and the Google Calendar API for event creation with OAuth 2.0 and automatic token refresh.

NSplitter (Large File Handler) | Python, Cross-platform I/O
Created a cross-platform file splitter to handle large datasets exceeding four gigabytes. Implemented atomic write operations and disk space checks for safe splitting. Ensured compatibility across Linux and Windows using low-level file operations.

Famous Faces Classifier | Python, Scikit-learn, Support Vector Machine (SVM), Principal Component Analysis (PCA)
Implemented a facial recognition system using a Support Vector Classifier on the Labeled Faces in the Wild dataset. Applied PCA for dimensionality reduction and trained the model on preprocessed image data, achieving high classification accuracy on unseen faces.

WORK EXPERIENCE

Teamania — **Rockville, MD**
Associate manager — *April 2019 – Present*
- Led a team of 5 to optimize closing procedures, cutting down closing time by 25% through workflow restructuring.

UMBC Department of Biology — **Baltimore, MD**
Research Lab Aide — *August 2023 – December 2023*
- Collaborated closely with 6 graduate students to understand research needs and provide effective support