

# Martel Vasquez

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[Linkedin](#) | [GitHub](#) | [Portfolio](#)

## EDUCATION:

Bachelor of Science in Computer Science  
George Mason University  
GPA: 3.70

Expected graduation: August 2025  
Fairfax, VA

Dean's List: Spring 2024, Summer 2024, Spring 2025

## TECHNICAL PROJECTS:

- **Django Note API (Python, Django, TastyPie):** Built a **RESTful API** for a note-taking backend. Designed models, configured routing, implemented CRUD operations, and tested endpoints using **Postman**.
- **Flextimer App (Dart/Flutter):** Created a workout timer app allowing users to save routines, target muscle groups, and receive recommendations. Contributed to requirements, advanced features, and UI design (light/dark mode, app info), using **Agile workflow** and **unit testing**.
- **Tetris Game (Java):** Developed a playable Tetris game using 2D arrays; improved performance by **10%** with optimized redraw logic.
- **OS/161 Synchronization & Traffic Management (C):** Designed a three-way stop traffic simulation with lock-based synchronization. Used `thread_sleep()` and `thread_wakeup()` to prevent deadlocks and boost system efficiency by **30%**.
- **Cache Simulator (Java):** Implemented FIFO, LFU, and LRU caching algorithms using linked lists and hash maps; reduced data retrieval time by **20%**.
- **Pacman Maze Search (Python):** Created DFS, BFS, UCS, and A\* search algorithms for a Pacman agent. Built custom heuristics to solve various maze types efficiently.
- **Otur CPU Scheduler (C):** Engineered a CPU scheduler with three linked-list queues for StrawHat VM, improving task throughput by **15%**.
- **Image Processor (Java):** Processed PGM images using a quadtree data structure, achieving **25%** faster performance over baseline methods.
- **Portfolio Website (HTML, CSS, JavaScript):** Designed and deployed a responsive personal website to showcase projects and skills, improving user experience and layout adaptability.

## EXPERIENCE:

### Footwear Associate

Dicks Sporting Goods

August 2021 – Present  
Fairfax, VA

- Drove a **35%** sales increase through enhanced customer interaction and product knowledge.
- Elevated store's customer satisfaction by **20%**, earning praise for professionalism and team support.

## SKILLS:

- **Languages:** Java (Advanced), Python, C, HTML, CSS, JavaScript, SQL, Dart
- **Frameworks/Tools:** GitHub, Linux, VS Code, IntelliJ, CLion, Postman, JUnit, Django, TastyPie
- **Technologies:** REST APIs, Object-Oriented Programming, Git, Virtual Environments (venv)

## RELEVANT COURSEWORK:

- Data Structures, Software Engineering, Artificial Intelligence, Object-Oriented Programming, Formal Methods & Models, Computer Systems & Programming, Operating Systems, Analysis of Algorithms, Secure Programming and Systems, Database Concepts, Comparative Programming Languages