Beatriz Navas Aguilera

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Education

University of Central Florida   **Orlando, FL**
Bachelor of Science in Computer Engineering
Cumulative GPA: 3.6   Expected Graduation: December 2026

Experience

DHV Technology   **Malaga, Spain**
Software Engineering Intern   May 2025 – July 2025
- Built a **Python**-based automated test suite on Raspberry Pi hardware and wired it into the **CI/CD** pipeline, using **test-driven development**—cutting manual validation time 75%.
- Ran and debugged **C++** and **Python** simulation software for automated testing.
- Partnered with electrical, software, and test engineers to audit, refactor, and unify embedded **firmware**, streamlining shared features across three + product lines on a **Linux / Raspberry Pi** development stack.
- Architected and implemented the company's **GitLab** environment for 15+ engineers, instituting standardized branch policies, tag/version-milestone workflows, and role-based permissions using **Git Bash**—resulting in a 30% reduction in merge conflicts.

Biznaga Media   **Orlando, FL**
Software Engineering Intern   Jan 2025 – May 2025
- Engineered a **Python**-based **machine learning** pipeline using **pandas** and **scikit-learn** to process and analyze campaign spreadsheets for 50+ marketing initiatives, delivering actionable insights and next-step recommendations implementing DevOps best practices.
- Collaborated in a **Scrum** team to automate branded PowerPoint generation using **python-pptx**, producing 200+ aesthetic slide decks—complete with **Matplotlib** charts of CTR, conversion rate, and ROI—reducing manual report creation time by 75%.
- Integrated an insight summarizer that extracted top three performing channels, identified performance anomalies, and generated actionable recommendations—accelerating campaign optimization decisions by 15%.

Full-Stack Developer Intern   June 2024 – Aug 2024
- Designed and built **MERN**-stack website components (**React.js**, **Node.js**, **Express.js**, **MongoDB**) in a **Agile** environment for 10+ features, boosting scalability, stability, and responsiveness.
- Optimized **full-stack** codebases to ensure consistent, high-performance operation across more than 5 mobile device form factors.
- Partnered with a cross-functional team of 3 to refine and assess 20+ component proposals—evaluating technical feasibility, estimating development effort, and expediting project kickoffs.

Projects

Gym Buddy | *MERN Stack, JavaScript, Machine Learning, Natural Language Processing, Full Stack, Python*   April 2025
- Built a **full-stack** fitness tracker used by 100+ users, featuring real-time streak tracking, muscle-region analysis, and intelligent recommendations. Using **MERN** stack (**MongoDB, Express, React, Node.js**) for the test driven development.
- Designed and deployed a **ML model** using **python** to detect undertrained regions and suggest exercises to improve muscle coverage.
- Developed an **NLP** parser to auto-extract reps, weight, and exercise type from free-text logs with 90%+ field accuracy.
- Created dynamic visualizations like calendar heatmaps and pie charts to highlight user performance trends using **JavaScript**.

License Plate Recognition System | *MongoDB, Express.js, React, Node.js JavaScript, Python, Machine Learning, Scikit-learn*   March 2025
- Developed a **full-stack** license plate recognition system using **MERN** stack for a seamless front-end to back-end connectivity.
- Tuned image-processing pipeline with **scikit-learn** to optimize detection accuracy and match confidence in real-world conditions.
- Integrated a **python machine learning** algorithm to detect and extract license plates from images with 96% accuracy.
- Matched recognized license plates to user profiles in a **database**, managing over 5,000 records for scalable performance.

KnightHacks StayDrippy | *TypeScript, CSS, JavaScript, OpenAI API, HTML, CSS, CRUD Operations*   October 2024
- Developed a responsive web app using **JavaScript** and **TypeScript** for back-end and **HTML** and **CSS** for front end during a hackathon, achieving a 30% boost in player success.
- Integrated **ChatGPT-4 Open API** to generate in-game, real-time strategy suggestions based on player input.

Technical Skills

Languages: JavaScript, Python, C, C++, C#, Java, TypeScript, SQL, HTML/CSS
Frameworks & Tools: React, Node.js, Express.js, MongoDB, Git, Figma, Jira, API Dev., VS Code, Postman, SQL, Bash, Tailwind CSS, Asp.Net
Machine Learning/AI: scikit-learn, TensorFlow.js, NLP (regex, smart parsers), python-pptx
Courses: Object Oriented Programming, Computer Science 1 (C) & 2 (Java), Embedded Systems, Computer Organization, Digital Systems

Leadership & University Involvement

SOCIETY OF HISPANIC PROFESSIONAL ENGINEERS (SHPE) – UCF Chapter   **Orlando, FL**
Board Member, Tech Committee, Projects Committee   *Aug 2022–Present*
- Contributed to strategic direction and organizational success of the chapter by participating in decision-making processes and collaborating with fellow board members to shape SHPE UCF's mission.
- Supported team and individual projects by combining computer science and computer engineering skills, successfully completing 5 major projects that enhanced team collaboration and members' technical skills.