

FRANCISCO NAVA

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Computer Science major looking to apply theoretical knowledge and contribute to dynamic and innovative software engineering and IT roles.

EDUCATION

The University of Texas Rio Grande Valley
Bachelor of Science in Computer Science

Expected Graduation: Fall 2023
GPA: 3.56

South Texas College
Associates Degree in Interdisciplinary Studies

August 2016 – June 2020
GPA: 4.0

WORK EXPERIENCE

UT Health (Dallas Country Health and Human Services)

Remote

Intern – Data Analytics Intern

September 2023 – Present

- Utilizing various software to efficiently gather and preprocess community data, ensuring accuracy and reliability for downstream analytics.
- Leveraging Power BI to design and implement interactive dashboards, offering stakeholders an intuitive view of key public health metrics.
- Organizing raw community data into impactful visualizations, aiding UT Health in data-driven decision-making as well as its stakeholders.
- Streamlining the data processing pipeline, facilitating efficient analytics, and ensuring the data is sufficient and relevant for certain tasks.

Multiple Autonomous Robot Systems (Swarm Robotics) - UTRGV

Edinburg, Texas

Research – Research Assistant

April 2023 – Present

- Actively engaged in collaborative research that focuses on the practical application of Python programming in autonomous robot behavior.
- Implementing simulations in virtual environments to anticipate robotic behaviors, with the aim of enhancing predictability in the real world.
- Transitioning from virtual simulations to real world design applications using ROS and controller code from the simulations.
- Utilizing techniques such as foraging algorithms, path planning and obstacle avoidance to optimize robotic response.

Edinburg Consolidated School District

Edinburg, Texas

Intern – Web Master Intern

September 2022 – Present

- Managing over 30 school websites using a content management system and serving as a go-to resource for technology troubleshooting
- Utilizing Structured Query Language (SQL) to effectively navigate the district website's database and extract relevant information.
- Collaborating with cross-functional teams to design and implement innovative solutions for improved efficiency and user experience.
- Managing and analyzing diverse datasets and employing advanced data processing techniques to drive informed decision making.

PROJECTS

E-puck Robot

Developed a virtual autonomous scavenging e-puck robot using Python and Webots that uses bug0-algorithm to reach a target destination. Currently improving the e-puck's capabilities to find "food" and create a memory-limited path that is transmitted back to base for other e-pucks.

EasyPeasyPal App

Creating an app that allows users to harness the full potential of technology to address everyday requirements regardless of their tech experience. Utilizing the Flutter framework and software engineering methodologies to develop a cross-platform mobile app to for a seamless user experience.

Access Request Form

Developing a web application that allows employees to request access permissions to the district's internal management applications. Web application is built using C# .NET Framework, REST API's, and custom SQL queries for data retrieval and digital record keeping.

COMPETITIONS

Nissan Design Challenge

Participated in a design challenge where we were tasked on finding how to improve sustainability in current electric vehicles and be cost effective. My team proposed switching the separators located within lithium-ion batteries from Polyolefin to phase-changing materials such as Paraffin Wax

IEEE Coding Hackathon

Participated in a 24-hour competition that involved solving practical problems that required extensive computer science knowledge. Using C++ and Python, my team and I placed 3rd in our university, 12th in Region 5 and in the top 40% internationally.

Frontera Devs Hackathon

Competed in a 24-hour competition that required a project that would benefit our community and considers our geography. My team created a website with a database, and API's that targeted Spanish speaking families seeking inexpensive medical services.

SKILLS

Languages: C++, HTML, CSS, Python, JavaScript, SQL, Ruby, Dart

Software: Linux, MATLAB, Jupyter Notebook, CMS, ReactJS, Node.js, GitHub, Git, SQLite, VS Code, Webots, Flutter, Xcode, Power Bi