

James Ortiz

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EDUCATION

Florida State University

Tallahassee, Florida

Bachelors of Science in Computer Science, Minor in Mathematics - 3.6 GPA

05/13/2017-04/24/2021

- **Relevant Courses** - Analysis of Algorithms, Data Structures, Object-Oriented Programming, Software Engineering, Requirements Engineering, Computer Architecture, Mobile Development, Discrete Mathematics, Artificial Intelligence, Compiler Construction, GUI Development, Operating Systems

EMPLOYMENT

Tata Consultancy Services (TCS)

Jacksonville, Florida

Software Engineer

08/09/2021 - Present

Hours: 40 per week

- Developed a shopping web application with administrative privileges using Angular.
- Created RESTful backend services with mongoose and MongoDB to update and maintain user orders.
- Utilized Java Servlets and Apache Tomcat to create a Dynamic Web Application for enterprise applications.
- Implemented Big-Data solutions to clean large data-sets with Scala and Python using the Spark framework.
- Leveraged knowledge in Java EE, Apache Tomcat, JDBC, Node.JS, Angular, HTML, CSS, MongoDB, Mongoose, Scala, Python, Apache Spark

PROJECTS

Personal Website: <https://jtonyortiz.github.io>

Open-Source System Monitor

- Elegantly displays current CPU usage, user processes in order or ram usage and system up-time.
- Program designed to be user-friendly and resemble the top command found in Linux machines.
- Utilized: C++, ncurses, CMake, Ubuntu Linux

Real-Time Vehicle Identifier for Cyclists

- Designed to help improve a cyclist awareness by detecting incoming/oncoming cars on the road.
- Uses a camera feed, and latest embedded computer-vision and machine-learning libraries to detect vehicles.
- Cyclist is warned of a vehicle by sound if the car is approaching their bicycle using a trained AI program that detects vehicles with 99% accuracy.
- Agile development tools were used with the development team alongside the Scrum framework from beginning to completion of the industrial project, totaling 4 months.
- Utilized: Raspberry Pi, Ubuntu Linux, git, OpenCV, Keras, Python 3, Adam Optimization

Qt Text Editor

- Allows users to copy, modify, select, and save input to a file.
- Provides interactive user-friendly interface design, with messages and icons.
- Developed with cross-platform support for Windows, Linux, and Mac OS.
- Utilized: C++, Qt Creator, Qt Widget, QML, CMake

IO2D A* Algorithm Route-Planner

- Utilizes Djikstra's A* algorithm to map an optimal path between two coordinates.
- Provides descriptive map output for the user to view starting and ending point.
- Program utilizes modern object-oriented design patterns for easy development testing and modification.
- Utilized: C++, Djikstra's Algorithm, Design Patterns, CMake, IO2D C++ Library, Linux

TECHNICAL SKILLS

Software Development

- **Programming Languages** - C, C++, Java, Python, Scala, JavaScript, TypeScript
- **Enterprise Web Applications** - Java EE, Java Server Pages, Java Servlets, Spring
- **Databases** - MariaDB, MongoDB, NoSQL, MySQL, OracleSQL, JDBC
- **Frameworks** - Qt, Apache Spark, Android
- **Web-Development** - HTML, CSS, Node.JS, Angular, Npm
- **Unit-Testing and Tools** - JUnit, GoogleTest, Git, Gdb, GNU Make, CMake, GCC, Clang
- **Interactive Desktop Environments** - Visual Studio, Visual Studio Code, Eclipse, IntelliJ, Qt Creator
- **Operating Systems** - Unix, Linux, Windows, Mac OSX

TECHNICAL PAPERS

Distributed Systems and Computing - MapReduce (COT4401 - Top 10 Algorithms)

- *"An Introduction to the MapReduce Algorithm"* - Completed 04/14/2019

Programming Languages - Ada (COP4020 - Programming Languages)

- *"History, Design, and Implementation of the Ada Programming Language"* - Completed 08/26/2020

Software Engineering - Computer Aided Software Engineering (CEN4020 - Software Engineering I)

- *"Applications and Irregularities of CASE Tools in Software Development"* - Completed 12/05/2020

AFFILIATIONS AND SOCIETIES

Institute of Electrical and Electronics Engineers (IEEE)

Professional Member

04/21/2022 - Present

- The Institute of Electrical and Electronics Engineers (IEEE) is a 501 professional association for electronic engineering and electrical engineering (and associated disciplines) with its corporate office in New York City and its operations center in Piscataway, New Jersey. It was formed in 1963 from the amalgamation of the American Institute of Electrical Engineers and the Institute of Radio Engineers.

Upsilon Pi Epsilon Honor Society (UPE)

Lifetime Membership

04/1/2021 - Present

- It is the express purpose of Upsilon Pi Epsilon to promote the computing and information disciplines and to encourage their contribution to the enhancement of knowledge. Upsilon Pi Epsilon (UPE) was first organized at Texas A and M University, College Station, Texas, in 1967. The international organization now consists of chapters in various colleges and universities in North America and overseas.

Society of Hispanic Professional Engineers (SHPE)

University Club Member, Professional Member

03/05/2020 - Present

- The Society of Hispanic Professional Engineers (SHPE) was founded in Los Angeles, California in 1974 by a group of engineers employed by the city of Los Angeles. Their objective was to form a national organization of professional engineers to serve as role models in the Latino community.

Association of Computing Machinery (ACM)

University Club Member, Student Member

06/10/2019 - 06/10/2021

- The ACM is a US-based, non-profit professional membership group. It was founded in 1947 and is the world's largest scientific and educational computing society.