John O'Brien

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EDUCATION

University of Central Florida - *Bachelor of Integrated Sciences & Technology (Computer Science / Physics Track)*
Minors in Computer Science and Mathematics   *Jan 2023 - August 2025* **|** Orlando, FL
Relevant Coursework: Computer Science 1 & 2, Discrete Structures, Object-Oriented Programming, Security in Computing, Computer Logic and Organization, Web UX & Design, Quantum Information Processing

St. Petersburg College - *Associate of Computer & Information Science*   *May. 2021 – May 2022* | St. Pete, FL

EXPERIENCE

Siemens Energy   June 2025 – Present
Software Engineering Internship   *Orlando, FL*
- Designed and implemented an excel **macro to automate** signal filtering across thousands of power plant data entries, improving diagnostic efficiency for sites across North America, South America, and Arabia
- Developed analytical workflows using **Seeq** to support data-driven insights and predictive maintenance within Siemens
- Spearheaded development of a **full-stack** internal web application called Pioneer to replace Microsoft Sharepoint for configuring analytical software setups, enhancing usability and development flexibility
- Collaborated with cross-regional engineering teams to streamline data management systems and improve operational visibility into turbine and generator performance signals

Bosch GmbH   May 2024 – August 2024
Robotics / Software Engineering Internship   *Charleston, SC*
- Collaborated daily with MetraLabs & AGILOX robots to ensure efficient parts delivery within the plant
- Improved line efficiency by 23% by implementing **automated guided vehicles** (AGVs) to automate flow of material
- Developed and maintained **Tableau** reports for long-term robot data analysis with **SQL**
- Generated various reports using Excel macros and automation programs to support plant operations
- Assisted with general engineering tasks to support plant efficiency and productivity
- Managed physical and systematic warehouse inventory in **SAP** to ensure the continual operation of manufacturing lines

Bosch GmbH   May 2022 – April 2023
Software Engineering Internship   *Charleston, SC*
- Architected and deployed Orion on an active server, building a scalable backend & frontend using **Node.js** and **React.js**
- Configured **RESTful APIs** to handle complex data transactions and real-time updates
- Responsible for development and implementation of new functionality via **HTML**, **CSS** styling, & **JavaScript**
- Utilized bitbucket as source code repository and **PostgreSQL** server
- Integrated SSO protocols following **OAuth2.0** standards, ensuring secure authentication and seamless access for users
- Applied **Python** and **Power BI** to perform field data analysis and predict potential patterns

PROJECTS

AgiLox One - Automated Logistics Warehouse   May 2024 – August 2024
- Programmed and tested AGILOX ONE forklift robots for use in a fully automated logistics warehouse, facilitating the autonomous delivery of products directly to the production line without human interaction
- Established and optimized mapping systems throughout the facility to ensure efficient robot navigation and operation across different environments
- Conducted rigorous testing of the robots in various real-world scenarios to ensure functionality, safety, and smooth integration into the warehouse's operations

Orion Laboratory Management System   May 2022 – April 2023
- Developed and deployed Orion, a full stack web application designed to streamline the quality control and teardown analysis process for diesel and gasoline fuel injectors
- Replaced manual Excel-based data entry with an automated step-by-step workflow, enabling engineers to collaborate, assign tasks, and input data more efficiently
- Integrated a backend database for secure data storage, allowing for automatic generation of Excel reports
- Built using **PostgreSQL**, **Node.js**, and **React.js**; delivering a scalable solution adaptable to various quality processes

TECHNICAL SKILLS

Programming Languages: Python, C/C++, SQL, JavaScript, HTML/CSS, BASIC, Java, R, SQL
Proficiencies: Node.js, Express.js, React.js, Angular, HTML5, CSS3, PostgreSQL, MongoDB, MySQL, Git
Technologies: Visual Studio Code, Visual Basic, Microsoft Office, MATLAB, Power-BI, Tableau, CMD/Terminal, Seeq
Activities: Google Student Developer Club, Institute of Electrical and Electronics Engineers, Eagle Scout