

Arwin Arun Swapna

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EDUCATION

Bachelor of Science in Computer Science

Expected: 2023

GPA: 3.65/4.00

University of South Florida

Tampa, FL

Experience

Research & Development Intern – Smart Sensors Group

Aug 2021 - Present

Asea Brown Boveri (ABB)

Greenville, SC

- Developing App tester using a **Robot** (Dobot Magician) and **WPF** to create **100+** test scenarios for ABB mobile applications, to detect bugs
- Setup a On-Premises Gateway using Raspberry Pi, for logging data for long-term bearing test using **ABB Ability Smart Sensor**
- Working on creating **drivers** for **RTC** (Real Time Clock) using **I²C** communication protocol for the 2nd Gen ABB Ability Smart Sensor
- Conduct connectivity range tests with **SALT** sensor using On-Premises Gateway and ABB Ability Smart APP
- Contribute to documentation improvements for **Cassia** Gateway which helped troubleshoot Connectivity and Network issues
- Collaborate with Engineers from Poland for **ARES** sensor and pushed code improvement into ABB GitHub repositories

Software/Hardware Developer – Digital Humanities and Heritage Collections

Aug 2020 – Aug 2021

University of South Florida

Tampa, FL

- Engineered Photogrammetry Rig by incorporating a Raspberry Pi 4 which remotely captured and stored images from cameras
- Programmed a **Python** script which utilized the **gphoto2** library to the Raspberry Pi to capture images from the cameras.
- Decreased data collection time by exported data from the Camera to SSD using Python script
- Designed a suitable case using **SolidWorks** which was able to securely hold the Raspberry Pi, SSD and Power Supply
- Created bi-weekly sprints in **Agile-Jira**, for project management

Student Programmer - Digital Humanities and Heritage Collections

Mar 2020 – Aug 2020

University of South Florida

Tampa, FL

- Created a Console App using **C#**, which harvests (and organize) metadata via Sketchfab.com's **API** for the new/updated resources for the DHHC 3D models Digital collection
- Performed a call of the Sketchfab.com's **REST API** and deserialize the **JSON** output into accessible metadata for data organization
- Stored metadata from API into a **SQL** Server Database for easier data representation and organization
- Executed various queries and commands to increase data reliability and data accuracy

INVOLVEMENT

Electrical Technology Lead – Chem E Car

Dec 2020 – May 2021

American Institute of Chemical Engineers

Tampa, FL

- Designed electrical circuit which powers the motors of the Chem E Car using an **Arduino**, **Photosensor** and laser
- Worked with Stopping Mechanism Lead to devise a code in **C++** to cut off power when the photosensor limit is triggered
- Conducted tests to determine the luminescence value of the Photosensor to trigger the power cut off to the motors

Real-Time Lane Detection Application

Oct 2021 – Present

Project

- Working on creating a lane detection application for automobiles using **OpenCV** and **Python**.
- Capture video in Real-Time using a camera and convert it into grayscale for lane detection

SKILLS

- Languages: **English**
- Programing Languages: **C, C++, C#, WPF, SQL, Java, JavaScript, Python, HTML, CSS, XAML**
- Software / Technologies: **GitHub, Agile-Jira, CorelDraw, Illustrator, MS office**