

umersalman

about

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programming

CSS & HTML

♥ PHP (Laravel,
CakePHP)
MySQL

Bootstrap

JavaScript, jQuery

Java, C, C++

LaTeX (this résumé)

Python

Assembly

MATLAB

LabVIEW

Git, SVN, Mercurial

operating systems

Linux

Android

OS X

iOS

Windows

software skills

SolidWorks

Burp Suite

ROS2

Gazebo

OpenCV

ArduPilot

ADB/Fastboot

education

2016–2020 **BS in Electrical and Computer Engineering - Fall 2020**

The University of Texas at Austin

Tech Cores: Software Engineering/Design and Academic Enrichment + Minor: Business

- **Embedded Systems Lab:** Created a USB 10-Keyless RGB Keyboard with Macro Recording using TM4C microcontroller [<https://youtu.be/fSX6dDx9jvY>]
- **Entrepreneurship Senior Design (CTO):** Built a wearable + software platform to collect and process physiological indicators to assist in diagnosing mental health issues in children [[Video](#)]
 - Designed PCB integrating an Adafruit Feather with a SD-card, Bluetooth module, galvanic skin response sensor, heart rate sensor, microphone, and battery
 - Built Azure/Tableau web platform for healthcare professionals to view data
 - Formed a business plan and presented to biomedical industry experts [[Video](#)]

experience

2021–Now **Southwest Research Institute**

San Antonio, Texas

Research Computer Scientist

- Develop Science Operations and Data Analysis Systems in Space Science Division (Div 15)
 - Build modular full-stack interactive web apps for 50+ spacecraft and instruments including LAMP, Lucy, and Europa Clipper. Ensure swift deployment for new missions with smaller budgets and timelines, such as CubeSats, without compromising functionality
 - Engineer mission-critical support software for flyby planning, data processing & visualization, access control management, and legacy/modern software (IDL, FORTRAN, C++, Python) integration. Creates personalized mission data dashboards, providing Health and Safety plots for engineers and science data for the scientists
- Researched and developed containerization (Docker/Kubernetes) of space science tools through an Internal R&D grant, allowing for intelligent batch processing on HPCs or AWS as needed
 - Presented insights and implementations at CakeFest 2023 Conference [[Video](#)], [[Slides](#)] and Data, Analysis, and Software in Heliophysics (DASH) [[DOI: 10.5281/zenodo.8412469](https://doi.org/10.5281/zenodo.8412469)]
- Created React UIs for a EW radar mission in Defense and Intelligence Solutions Division (Div 16)

2019, 2020 **National Geospatial-Intelligence Agency**

St. Louis, Missouri; San Antonio, Texas (WFH)

Cybersecurity/Software Development Intern - Clearance: TS/SCI

- Created automated rulesets and scripts for Detect and Incident Response teams
- Developed a NodeJS grammar tool for classified environments to correct 6k writing mistakes and improve editing efficiency across NGA's Weekly Activity Reports, reports to Congress, etc
- Assisted in cyber-deception (honeypot "network devices") tool analysis

2018

Visa Inc.

Austin, Texas

Security Engineering Intern

Created automated penetration testing suite using Burp Suite and Python to increase security while decreasing time in security testing stage

- Tool tests Visa products & APIs for vulnerabilities such as XSS and Clickjacking
- Learns from cybersecurity team to eliminate false positives

extracurriculars

2017–2020 **Texas Aerial Robotics (TAR)**

The University of Texas at Austin

Founder and President

- Led a 40 person org. to compete in the International Aerial Robotics Competition
- Build and program cutting-edge, fully autonomous quadcopters
- Use computer vision, LiDAR, and optical flow to target and interact with moving ground robots in a GPS-denied environment
- Research drone swarming and drone control through human voice and gestures
- Develop abilities to interact with modules on moving reference frames (boats) 2mi away