Tejas Maraliga

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EXPERIENCE

Page Research Group — Feb. 2022 – Present
Undergraduate Research Assistant — *Austin, TX*

- Designing a system for the visible light photoROMP of dicyclopentadiene using a latent ruthenium metathesis catalyst.
- Utilizing analytical techniques such as Fourier Transform Infrared Spectroscopy, photorheology, and tensile testing to evaluate resin curing characteristics and ultimate material properties.
- Utilizing low intensity visible light DLP 3D printing technology to pattern complex polydicyclopentadiene structures.

Longhorn Racing Internal Combustion — Feb. 2022 – Present
Software Lead — *Austin, TX*

- Created a pipeline for end-to-end streaming of telemetry data, managing data acquisition, processing, storage, and visualization within a resilient cloud infrastructure.
- Designing and manufacturing PCBs for onboard data acquisition on an internal combustion engine racecar.
  - Writing firmware to interface with a variety of sensors and devices over I²C, SPI, CANBus, and UART.
  - Enabling live telemetry broadcasts to local base stations via a custom 915 MHz radio module.
- Utilizing telemetry data to build and tune closed loop PID control systems for driver assistance features such as launch and traction control.

Fidelity Investments — Jun. 2022 – Aug. 2022
Systems Engineering Intern — *Smithfield, RI*

- Created a portal to facilitate server-to-server messaging, enabling creation and testing of event subscriptions for financial institutions.
  - Provided a testing team with autonomy to stream event notifications to financial institutions without intervention from a team of developers.
- Performed full-stack development, utilizing technology such as Angular, Springboot, Oracle Database, and Apache Tomcat.
- Worked heavily within **Agile**, utilizing scrum ceremonies to increase velocity throughout each sprint.

The Internship Initiative LLC. — Jan. 2020 – Dec. 2022
Vice President of Technology — *Southborough, MA*

- Single-handedly designed and implemented backend infrastructure for three enterprise products on Amazon Web Services.
  - Utilized services and technology such as REST, GraphQL, Amazon Cognito, Redis, DynamoDB, Amazon S3, Lambda, EC2, and Elasticsearch.
- Built Flask apps to serve three React web-apps while assisting with front-end development and backend integration.
- Enforce DevOps practices such as Infrastructure as Code, unit and integration testing, CI/CD, and continuous monitoring.

EDUCATION

The University of Texas at Austin — Expected May 2024
Bachelor of Science in Chemical Engineering & Computer Science — *Austin, TX*

- GPA: 3.6/4.0

CERTIFICATIONS

AWS Certified Developer-Associate — Aug. 2021
Validation Number: 200XB5QLM2EQ105Q

SKILLS & RELEVANT COURSES

Technical Skills: Angular, AWS, Bash, C, DLP 3D Printing, Docker, Express.js, FDM 3D Printing, Flask, Git, GraphQL, Java, JavaScript, Jest, Jira, Linux, MongoDB, Node.js, Oracle Database, Pytest, Python, React, SLA 3D Printing, Springboot, Tomcat

Laboratory Skills: Air-free techniques (Schlenk Line operation), Fourier Transform Infrared Spectroscopy, Glovebox operation, Photorheology, Tensile Testing, UV-vis spectroscopy