GM

# GARETH MEREDITH

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## PROFESSIONAL SUMMARY

Graduating senior with strong interests in applied mathematics and data analysis. Searching for a position to obtain valuable industry experience while working with a team towards a greater goal with real-world implications.

## WORK HISTORY

**Administrative Assistant** | University Of Texas At Austin - Austin, TX 09/2017 - CURRENT

- Provided diversified levels of support for UT's Aerospace Engineering department
- Assisted in graduate lab setup and maintenance
- Provided clerical assistance to office administration
- Worked closely with managerial staff on building and office maintenance
- Personally managed larger projects, most recently coordinated PPE dispersal to department students and faculty in response to the Covid-19 pandemic

**Installer** | Vital Designs Inc. - Wills Point, TX 03/2020 - 08/2020

- Fulfilled demanding summer-long contract for an international corporation
- Individually coordinated and carried out work site surveys
- Increased efficiency and proficiency by optimizing site workflow
- Worked effectively in constantly changing environments under tight time constraints

## HONORS

**UT Presidential Scholarship Recipient** - 2017-2021
**University Honors** - Fall 2017 - Fall 2018, Spring 2019 - Spring 2020

## EDUCATION

University Of Texas At Austin, Austin, TX EXPECTED IN 05/2021

**Bachelor of Science**: Computational Engineering

## TECHNICAL SKILLS

- Multi-language programming (Matlab, C++, Python, R, Fortran)
- 3D AutoCAD design (Solidworks, Ansys)
- In-depth mathematical background
- Computational modelling and finite element method implementation
- Experience with openFOAM, Ansys Fluent, and other numerical solvers
- MS Office proficiency
- Experience with git workflow
- REST API Development
- Database Management

## PERSONAL SKILLS

- Creative Problem Solving
- Adaptability
- Punctuality
- Strategic Planning
- Verbal and Written Communication
- Eagerness to Learn

## RELEVANT PROJECTS

- **NYPD Data Analysis Rest API, Spring 2020** - Built a functioning python flask app that managed and interfaced with a Redis database consisting of all arrests made in New York City in 2019. The application allowed for users to request and insert data points based on a number of criteria such as location of arrest, crime committed, race, etc. Furthermore, the application allowed for real-time data analysis and plot production based on user inputs and requests.
- **2-D Truss Solver, Spring 2020** - Utilized the finite element method to produce a robust code that solves for the node displacements and member forces of a 2d truss structure being acted on by an external force. Created, from the resulting solutions, a visualization of the structure and its resulting displacements with variable magnification for in-depth analysis.
- **Disease Propagation Model, Fall 2019** – Created a population model within C++ that, utilizing object oriented programming, modeled the growth and decay of a customizable disease within a population of variable size, immunity, health, and density. I then ran a large number of tests with varying permutations of parameters, cleaned and compiled the datasets into usable information, and drew relevant, informed conclusions about the effects of certain parameters on the disease's propagation.
- **Reverse Engineering Project, Spring 2018** – As part of a group, reverse engineered a functioning tape faucet using drafting and replication in SolidWorks. Oversaw the entire replication process for several parts including the complex outer casing. 3D printed the individual parts and presented the final assembly in front of a group of 30+.
- **MRI Tumor Recognition, Fall 2017** – Used Matlab grayscale image processing to recognize and extract locational data pertaining to a cancerous rat's tumors. Required quick learning and resourcefulness as the methods for obtaining the correct data had not been taught prior to the project's undertaking.