

# DANI DOLAN

(281)-975-7392 • Madison, WI • [dani.dolan757@gmail.com](mailto:dani.dolan757@gmail.com) • [linkedin.com/in/dani-dolan](https://linkedin.com/in/dani-dolan) • [dani-dolan.github.io](https://dani-dolan.github.io)

## EDUCATION

**Texas A&M University** | Bachelor of Science in Geophysics

Dec. 2019

- Major GPA: 3.76/4.0
- Sigma Gamma Epsilon Honors Society
- Programming Coursework: Signal Processing, Computer Concepts and Program, Linear Algebra, Differential Equations

## EXPERIENCE

**Software Engineer - Intern**

June 2020 - Present

TDS Telecommunications | Middleton, WI

- Updated content, and automated GIS data management tasks by developing Python scripts using ArcGIS REST API
- Delivered department-wide emails with file attachments using an SMTP server running on an asynchronous task queue
- Increased productivity of three interns through training on current project best practices
- Collaborated with a cross-functional agile team of software engineers on development, deployment, and troubleshooting
- Built a fully functional interactive dashboard from GIS map data using HTML, JavaScript, and Arcade
- Reduced project time by developing potential geospatial data engineering solutions and applications for outside departments

**Research Engineer - Assistantship**

Aug. 2019 - Dec. 2019

Geology and Geophysics Department | College Station, TX

- Established remote testing and coding development environment using Docker and bash
- Developed 3-D vector fields of seismic wave propagation using Python
- Implemented a low pass and smoothing function filter to perform data averaging on seismic data
- Gave in-person instruction to six peers to help them acquire greater knowledge of Python data processing
- Leverage knowledge in Git, Python, MATLAB, Fortran

## PROJECTS

**Personal Website:** [dani-dolan.github.io](https://dani-dolan.github.io) (for additional information and projects)

**Github Page:** [github.com/Dani-Dolan](https://github.com/Dani-Dolan) (for source code and projects)

**Real-Time Interactive 3-D Graphics Website** ([constellation-creator.github.io](https://constellation-creator.github.io))

**Project Code Link:**



- Developed an interactive graphics website using CSS libraries to create real-time spatial animations of crystal lattice structures
- Incorporated Tweakpane library for fine-tuning parameters and monitoring changes from user input
- Utilized: HTML/CSS, JavaScript, GIT, Tweakpane, Ruby

**AI Learns to Play a Game** ([flappy-unicorn.github.io](https://flappy-unicorn.github.io))

**Project Code Link:**



- Implemented JavaScript neural network library and a genetic algorithm to train an agent to play Flappy Bird
- Integrated neuroevolution of augmenting topologies by reinforcement learning algorithms on an agent
- Utilized: HTML/CSS, JavaScript, Neuroevolution Principles, GIT, Jekyll, AI Library

**Password Generator Based on Favorite Book**

**Project Code Link:**



- Integrated a natural language processing library in Python to generate meaningful passwords based on a chosen text or book
- Generated passwords based on user input for number of words, character count, chosen text, and leetpeak
- Utilized: Python, spaCy, GIT, PyCharm

**Sorting Visualizer - In Progress**

- Designed an interactive website that visualizes different sorting algorithms: Selection Sort, Bubble Sort, and Merge Sort.
- Implemented functionality for array size control and speed control
- Utilized: Sorting Algorithms, JavaScript, HTML/CSS, GIT

## SKILLS

- **Proficient:** Java | JavaScript | Python | HTML/CSS | SQL | Git | Windows | MATLAB | ArcGIS Pro | AGOL | Jira
- **Familiar:** C#/.NET | Scala | Linux | Oracle | CAD | AWS
- **Microsoft Office:** Word | PowerPoint | Excel | Outlook | Access | Teams