

GERARDO SALAZAR

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Houston, TX

EDUCATION

The University of Texas at Austin
B.S. Mathematics & B.S. Physics

2017 - 2020
GPA: 3.5

WORK EXPERIENCE

Software Engineering Intern

August 2019 - August 2020

Oden Institute for Computational Engineering and Sciences

- Single-handedly built and deployed a full-stack web application that provides ready access to a NoSQL database containing gyrokinetic fusion simulation for fusion researchers
- Assisted in system design as well as building database infrastructure and tooling.
- Data and application hosted at the National Energy Research Scientific Computing Center
- Python, Flask, Bootstrap, MySQL, MongoDB, Docker, Gunicorn, Nginx

PROJECTS

This Pokemon Does Not Exist

- Trained a Deep Convolutional Generative Adversarial Network (DCGAN) and Convolutional Variational Autoencoder (CVAE) to generate new images of Pokemon
- Developed a Flask API to serve model inferences via HTTP requests
- Tensorflow, Flask, AWS EC2, AWS S3, AWS ECS

PGA Tour Data Analysis

- End-to-end data science project based on dataset of 46 million rows of PGA Tour Golf statistics
- Produced Bayesian inference and Machine Learning models as well as accompanying reports and documentation
- PySpark, Pandas, PyMC3, Scikit-Learn, SQL, Sphinx, Make, Jupyter

Gravitational-WaveNet

- Created a custom neural network architecture and experimentation framework for classification of noisy time-series data consisting of synthetic gravitational waveforms
- Wrote a paper documenting methods, theory, and results
- Tensorflow, NumPy

Good-Morning Bot

- Developed a script to send good morning text messages containing media from several APIs
- Deployed on AWS Lambda with custom Python packages and triggered by an AWS CloudWatch cron rule

SKILLS

Programming Languages
Software

Python, C++, R, HTML, CSS
Git, GitHub, AWS, Docker, Linux, Jupyter, LaTeX