Jacob Castaneda

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Education

Stanford University — Stanford, Ca
MS Environmental Fluid Mechanics: Data, Statistics, & Modeling — Sep 2019 - Mar 2021

California Polytechnic State University- Pomona — Pomona, Ca
BS Civil Engineering — Sep 2015 - Dec 2018

Experience

JLC Engineering — Murrieta, Ca
Project Engineer — January 2023 - Current

- Perform hydrologic analysis in Southern California region using Rational Method and Unit Hydrograph Method
- Investigate hydraulic behavior of onsite/offsite flows for proposed developments using 1D & 2D modeling tools. Experience studying urban and natrual environments using HEC-RAS & WSPG.
- Assess, design, & study water quality mitigation measures for proposed development. Experience cultivating WQMPs for proposed developments.

Uplift — Sunnyvale, Ca
Data Scientist — Apr 2022 - Dec 2022

- Develop Fraud Monitoring Application that enables efficient traversal and exploration of Fraud Graph Networks
- Build Machine Learning classification model to determine whether loan applicants should be approved or denied based on credit risk assessment
- Experiment with various modeling paradigms including Logistic Regression, Decision Trees, and XGBoost
- Participate in feature development and explore various statistical characteristics of candidate features to determine feature efficacy
- Help amend and build custom python functions, tools, and classes to facilitate efficient model training, validation, and data exploration

Stanford University CEE Department — Stanford, Ca
PhD Candidate — Aug 2020 - June 2022

- Completed PhD Qualification examinations & compose comprehensive proposal of future PhD research
- Aggregate & investigate hundreds of GBs of in-situ wave data to calibrate a numerical wave modeling tool to accurately model the environment
- Operate camera equipped UAV to gather large dataset of imagery to investigate sediment transport physics in San Francisco Bay

Resource Management Associates — Walnut Creek, Ca
Junior Water Resource Engineer - Part Time — Aug 2020 - Jan 2022

- Implement multi-dimensional hydrodynamic numerical models
- Process input/output data for numerical models with Python and associated data processing packages (e.g. Pandas, Numpy, Matplotlib)
- Investigate & interpret model output for project stakeholders of various backgrounds

Software/Languages

Programming:	Python, SQL, C++, C, MATLAB
Software Tools:	Snowflake, GitHub, Tableau
Python Packages:	Pandas, Numpy, Matplotlib, Sklearn, Jupyter Lab

Awards & Certifications

Valedictorian of Civil Engineering California Polytechnic State University- Pomona
Recognized for obtaining the highest GPA in my degree program. Dec 2018

Part 107 Airman Certificate Certificate No: 4362954

Relevant Coursework

CME 200: Linear Algebra (2019);
CS 106B: Programming Abstractions (2021);
CS 107: Computer Organization & Systems (2021);
CS 110: Principles of Computer Systems (2021);
CS 131: Computer Vision: Foundations & Applications (2021);
CS 109: Probability & Statistics for Computer Scientists (2022) [Audited];
CS 229: Machine Learning (2022) [Audited];
CEE 262A: Hydrodynamics (2020);
CEE 262C: Coastal Ocean Modeling (2020);