

Joseph Dehoney

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WORK EXPERIENCE

Research Data Analyst, Computational Neuroscience Laboratory, Department of Psychiatry and Behavioral Sciences, Stanford University (05/2022 - Curr)

- Created data submission pipeline (incl. unit testing) to upload 10 years of neuroscience data to NIH repository
- Invented tools for efficiently resolving data quality issues reducing resolution time by 80 percent
- Aggregated data from multi-center studies by leveraging Python to harvest unstructured web content for use by lab researchers
- Unified processing pipeline using containerization to enable deployments across different computing environments
- Collaborate with researchers to curate datasets within REDCap to support longitudinal data analysis, and to facilitate development and evaluation of machine learning models
- Report frequently to government officials and stakeholders about compliance of data collection and distribution
- Administrate linux compute clusters (10 nodes) and storage servers (1 Petabyte)

Product Manager, CoolWine, *Santa Rosa CA* (07/2019 - 04/2021)

- Assisted in design, fabrication, and deployment of industrial beverage coolant systems
- Created the data pipeline and analysis for longitudinal equipment analysis

Student Manager, UC San Diego Recreation, *San Diego CA* (05/2017 - 06/2019)

- Designed and maintained the inventory system for 6 facilities
- Managed a team of 45 undergraduates, directing project creation, delegation, and supervising performance

Team Lead, Permanent Value Inc., *San Diego CA* (07/2016 - 05/2018)

- Managed 60 client investment portfolios totaling over 15 million in assets
- Proposed and implemented investment strategies and financial trades
- Presented recommendations and analysis to the company founder on a weekly basis

EDUCATION

Oregon State University

01/2022 - 06/2023

- BS in Computer Science
- GPA: 4.0
- Awards: Summa Cum Laude, Dean's List, Engineering Scholarship

University of California, San Diego

09/2015 - 06/2019

- BA in International Business, Minor in History
- GPA: 3.9 (Major), 3.2 (Cumulative)
- Awards: Provost Honors

TECHNICAL SKILLS

Languages: Python, C++, SQL, Bash

Libraries: Pandas, Numpy, Matplotlib

AI/ML: PyTorch, Tensorflow, Keras

Parallelism: CUDA, OpenCL, OpenMP

Tools: Airflow, AWS, Docker, Git, Jupyter, Kubernetes, Linux, REDCap, MySQL, MongoDB, Slurm, XNAT

STUDENT PROJECTS at OREGON STATE UNIVERSITY

Deep Reinforcement Learning for Financial Trading

- Created a deep reinforcement learning model based on Deep Q-learning for trading cryptocurrencies.
- Built a comprehensive data pipeline to collect, clean, and preprocess cryptocurrency market data.
- Fine-tuned the model's hyperparameters and architecture through extensive experimentation and analysis.
- Conducted thorough backtesting and performance evaluation to assess the model's effectiveness.
- Integrated the model with cryptocurrency exchanges through API integration for live trading.
- Documented the project's methodology, codebase, and results in a clear and concise manner.

Ecommerce Web Application, OSU App Development Club

- Created with other members of the data science team an AI system for demand forecasts of products
- Programmed models in PyTorch library.

PUBLICATIONS

- Qingyu Zhao, Magdalini Paschali, Joseph Dehoney, et al., Career Path Matters for Identifying High School Risk Factors that Forecast Heavy Drinking in Young Adulthood: Under Review (2023)
- Lauren Kupis, Zachary T Goodman, Salome Kornfeld, Stephanie Hoang, Celia Romero, Bryce Dirks, Joseph Dehoney, et al., Brain Dynamics Underlying Cognitive Flexibility Across the Lifespan, Cerebral Cortex, Volume 31, Issue 11, November 2021, Pages 5263–5274

EXTRACURRICULAR ACTIVITIES

UCSD Men's Rugby, *Team Officer* - Men's Collegiate League DII Champions 2019

Certifications

Deep Learning Specialization - Deep Neural Nets, CNN, NLP - *Deeplearning.ai* 2020