Reid Wyde

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SKILLS

Full Stack Software Engineering, Data Science

Languages: Python, TypeScript, Cython, JavaScript, PostgreSQL, GraphQL, Java, MATLAB, C, C++, Bash

Platforms: AWS EC2, AWS S3, Linux, Windows

Technologies: Docker, Kubernetes, ReactJS, NodeJS, PostgreSQL, Redis, Apollo, Postgraphile, Minio, PyPi, Poetry, Git, Conda, Numpy, Pandas**,** CUDA, XGBoost, PyTorch, Tensorflow, Keras, Scikit-Learn, Flask

WORK EXPERIENCE

Stealth Mode Startup – Full Stack Software Development Engineer 2/2022 – Present

- Built cross-platform front end UI for securities purchasing application using ReactJS and TypeScript
- Containerized application for scalable memory and storage using Docker and Kubernetes
- Integrated application with back end databases using GraphQL, PostgreSQL and Apollo
- Added permission configured multimedia data storage to application using Minio
- Published contributions to internal tooling libraries using PyPi and Poetry
- Implemented statistical analysis of stock time series data in Python
- Accelerated core utilities and time critical functions using Cython
- Reviewed and collaborated on code changes using Gitlab
- Built cross container data pipelines using Redis

Applied Research Laboratories UT – Engineering Scientist Associate 7/2020 – 2/2022

- Used computer vision and reinforcement learning to characterize the ocean acoustic environment
- Built parallel computing pipeline infrastructure to speed up data generation process 100x
- Collaborated with teammates on underwater acoustic simulation toolbox software design
- Created and delivered a 14 week course on data science, machine learning and deep learning

Infovision R&D – Deep Learning / Machine Learning Engineer 5/2020 – 7/2020

- Built real time multi camera multi person tracking system using computer vision and 3D camera systems
- Designed systems, created test framework and operated as technical lead for machine learning team
- Integrated RESTful web services using Flask and asynchronous multiprocessing in Python
- Created horizontally scalable camera input network using Redis

Microsemi Corporation – Audio Systems Engineer Co-op 2/2018 – 12/2018

- Architected convolutional neural networks to reduce speech reverberation using Keras and Tensorflow
- Prototyped signal processing algorithms for deployment in embedded systems using MATLAB and C
- Automated validation test bench data generation using Bash and Tcl

RESEARCH

Center for Computational Oncology UT – Research Assistant 6/2019 – 12/2022

- Contributing author to “Optimizing combination therapy in a murine model of HER2+ breast cancer”, *Computer Methods in Applied Mechanics and Engineering*, December 2022
- Developed and trained breast cancer growth models using Python
- Guided optimal chemotherapy and immunotherapy cancer treatment
- Integrated Markov Chain Monte Carlo statistical programming framework PyMC3
- Implemented gradient based calibration for system models in PyTorch, speeding convergence 10x
- Built treatment recommendation system using optimal control theory and GEKKO

EDUCATION

The University of Texas at Austin – B.Sc. Computer Engineering; GPA 3.85 8/2015 – 5/2020

Specialization: Software Development and Data Science

Coursework: Software Design and Implementation, Algorithms, Applied Statistics, Data Science, Real-Time Digital Signal Processing, Applied Linear Algebra, Probability, Numerical Methods