Joseph Kim

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EXPERIENCE

DeepLearning.AI - Mentor, Tester   2024 - Present
- Providing academic support for students enrolled in DeepLearning.AI courses, primarily in the Mathematics for Machine Learning and Data Science Specialization, covering Linear Algebra, Probability, Statistics, and Calculus.
- Testing and reviewing new course content, delivering qualitative feedback and suggesting fixes and improvements for course material and coding exercises.

Google - Software Engineer   2021 - 2023
- Led a cross-team project for large code migration efforts within Google Ads, removing thousands of lines of deprecated code, improving codebase health, and reducing build deployment times by over 10%.
- Managed the migration of machine learning models for agent assignment based on Case context, coordinating cross-team efforts, employing internal tools for testing, and developing database queries to materialize training data.
- Developed a language selection dropdown feature for Google Ads High-Touch Support, handling the entire full-stack development from backend Java APIs to frontend UI in Dart, deployed for live use by thousands of agents.
- Received 2 peer bonuses for significant contributions to codebase optimization and was awarded a badge for being a top 1000 code change submitter over a six-month period.

Codecademy - Content Contributor   2018 - 2021
- Authored comprehensive lessons, quizzes, projects, and articles for SQL and Python courses.
- Wrote coding exercises and solution validators using regex.
- Produced review cards and questions for the Codecademy Go app, downloaded by 1M+ learners.

PROJECTS

Super PolySpawn Wars | *C#, Unity*
- Developed a 2D space-shooter game using Unity and C#, featuring unique boss attack patterns and power-ups such as speed boosts, spread-shots, shields, and 1-ups.
- Link to project: https://github.com/josephtkim/super-polyspawn-wars

Denoising Diffusion Probabilistic Models (DDPM) in PyTorch | *Python, PyTorch*
- Implemented a diffusion probabilistic model in PyTorch for image generation, inspired by the paper https://arxiv.org/abs/2006.11239.
- Link to project: https://github.com/josephtkim/DDPM-diffusion

Sudoku Solver | *React, JavaScript, HTML, CSS*
- Created a React application that solves Sudoku puzzles using Brute Force and Dancing Links algorithms.
- Link to project: https://github.com/josephtkim/sudoku-solver

TECHNICAL SKILLS

Python, Java, SQL, TensorFlow, Keras, PyTorch

EDUCATION

Penn State University   2011 - 2015
Bachelor of Science in Mathematics, Minor in Physics