Kaloyan Parvanov

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SUMMARY

Machine Learning specialist with a strong background in Applied Mathematics and a proven ability to enhance AI model performance through meticulous data annotation. Consistently received top evaluator ratings (average 4.8/5) for quality and accuracy. Proficient in Python and ML frameworks; eager to drive innovation in AI and Data Science projects.

WORK EXPERIENCE

AI Training Specialist   Jul. 2024 – Present
DataAnnotation & Outlier AI   *Freelance*

- Enhanced AI models by correcting coding and mathematical responses, improving accuracy and reliability.
- Identified and rectified hallucinations in AI outputs, contributing to significant error rate reduction.
- Consistently achieved high evaluator ratings (5/5 excellent 65% of the time) for quality and precision of annotations.
- Collaborated with AI development teams to refine algorithms, leading to more precise AI solutions.

Graduate Teaching Assistant   Aug. 2021 – May 2024
University of Colorado Boulder   *Boulder, CO*

- Assisted in teaching Calculus and Differential Equations courses to over 100 students.
- Developed and graded assignments, providing constructive feedback that enhanced student understanding and boosted exam performance.

PROJECTS

MathBuddy: AI-Powered Math Tutor | *Next.js, FastAPI, Python*   Aug. 2024 – Sept. 2024

- Engineered a full-stack AI tutor utilized by over 200 users, leveraging GPT-4o for interactions and GPT-3.5-Turbo for result extraction and difficulty estimation.
- Implemented serverless architecture with Next.js frontend and FastAPI backend, integrating OpenAI and Wolfram Alpha APIs to enhance problem-solving capabilities.

Tic-Tac-Toe with Alpha-Beta Pruning | *Python, Pygame, NumPy*   June 2024

- Developed a Tic-Tac-Toe game featuring an AI opponent using the Alpha-Beta Pruning Minimax algorithm.
- Improved AI decision-making speed by 40% by reducing evaluated nodes, enhancing gameplay experience.

ODE Solution via PINNs | *Python, TensorFlow, SciPy*   Oct. 2023 – Dec. 2023

- Solved the damped unforced pendulum problem using Physics-Informed Neural Networks, demonstrating effectiveness in complex ODEs.
- Achieved 15% higher accuracy compared to traditional numerical methods, validating the potential of PINNs in solving differential equations.

EDUCATION

University of Colorado Boulder   Aug. 2021 – May 2024
*M.S. Applied Mathematics, **Focus:** Data Science & Machine Learning*   *Boulder, CO*

Lake Forest College   Aug. 2016 – May 2020
B.A. Mathematics, B.A. Economics   *Lake Forest, IL*

TECHNICAL SKILLS

Programming Languages: **Python** (Expert), R, SQL, C++, JavaScript
Machine Learning Frameworks: TensorFlow, PyTorch, scikit-learn
Deep Learning: Neural Networks, NLP, Physics-Informed Neural Networks (PINNs)
Data Analysis: pandas, NumPy, SciPy
Data Visualization: Matplotlib, Seaborn, Power BI
Web Development: FastAPI, Next.js
Tools & Platforms: Git, Docker, LaTeX