Gil Pasternak

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PROFESSIONAL SUMMARY

Driven and curious individual with research and industry experience across a multitude of domains, including NLP, cancer risk, drug discovery, data quality, and OSS. Dedicated Computer Science Masters student with strong interpersonal skills, a knack for asking the right questions, and a passion for innovation. Gil is currently looking for ML Research roles for Summer 2024.

RELEVANT PROFESSIONAL AND RESEARCH EXPERIENCE

NLP Research Engineer

Loris.ai / March 2023-September 2023, June 2024-September 2024

- Introduced Large Language Models (LLMs) and built all corresponding LLM infrastructure for company, including a complete "Talk to your data" system. Also built an ensembled "relevant text" classifier, which (in evaluations) filtered out over 60% of irrelevant text at 98% precision.

Research Assistant

Laboratory for Emerging Intelligence / August 2023-Present

- Co-wrote paper benchmarking LLMs ability to reason about biomedical meta-analyses, currently in review. Built initial prototype of the LLM system "AI Tutor", to be used for tutoring students in CSE 8A. Gave two review presentations on RLHF and RAG systems.

Research Assistant

Carter Lab, UCSD Department of Medical Genetics, San Diego / August 2022-Present

- Worked to develop neural networks to understand non-additive SNP Interactions and their contribution to breast/prostate cancer risk. Doubled spatial efficiency of existing neural network pipeline, freeing up lab compute. Scripted model-statistic generation for neural nets.

Bioinformatics-AI Intern

NVIDIA / June 2021 – October 2021

- Created deep learning microservices for drug discovery and parallelized deep learning models across GPUs with Kubernetes. Led containerization efforts. Tuned models with PyTorch.

Data Science and Machine Learning Intern

Superconductive / August 2020 – June 2021

- Built and deployed a cloud-based ML autocomplete to enhance user development experience. Played central role in reconstruction and redesign of open-source product.

Researcher

Freelance / April 2020 – August 2020

- Created Likelihood, a probabilistic data quality engine based in core Machine Learning Algorithms such as PCA and Kernel Density, as well as several information theoretic method such as conditional entropy. Project was presented at UC Love Data Week, and demonstrated in private demos to three companies.

EDUCATION

University of California, San Diego - Masters
GPA: 4.0

M.S. Computer Science, AI Specialization

Relevant Experience

- AI: Probabilistic Reasoning and Learning, Machine Learning, Deep Learning, NLP

- Seminar Presentations: "Word2Vec", "The Architecture of GPT-2"

University of California, San Diego - Bachelors
GPA: 3.968

B.S. Applied Mathematics Major, Computer Science Minor (graduated Mar 2023)

Relevant Coursework

- Linear Algebra, Calculus, Probability, Stats, Stochastic Processes, Real Analysis, Optimization

- Object Oriented Programming, Advanced Data Structures, Systems Programming, Theory of Computation, Theoretical Foundations of Data Science (Algorithms).

- Data Science, Machine Learning, Data Mining, Recommender Systems.

Recipient of **2022-2023 Physical Sciences Dean's Undergraduate Award for Excellence**

ADDITIONAL SKILLS

- Deep Learning Frameworks: PyTorch (fluent), Tensorflow (proficient)

- Programming Languages: Python (fluent), Java, C, C++, Git, SQL, R

- Mathematical Foundations of Neural Networks, Regression Methods, PCA, Kernels, SVM

- Data processing and visualization: Pandas, sklearn, NumPy, Seaborn, Matplotlib