ZUBAIR QAZI

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EDUCATION

University of California, Riverside   September 2018 - June 2023
B.S. Computer Science   *Magna Cum Laude*
M.S. Computer Science

Courses   Data Structures & Algorithms, Software Construction, Databases
Artificial Intelligence, Data Mining, Machine Learning, Deep Learning

TECHNICAL SKILLS

Languages   Python, C++, Java, Javascript, HTML/CSS
Software & Tools   PyTorch, TensorFlow, Pandas, VSCode, Jupyter Notebook, Git/GitHub, UNIX

WORK EXPERIENCE

Multi-Aspect Data Lab (M.A.D Lab)   *June 2023 - Present*
Independent Researcher

· Researching applications of machine learning models and tensor data for GPT detection.
· Engineered an efficient ETL pipeline to process 5,000+ Reddit posts per hour, optimize and transform the data, and seamlessly integrate with GPT detection models.
· Implemented asynchronous Python scripts for Reddit data extraction, achieving a 30% increase in data acquisition efficiency while also incorporating chat GPT data via the OpenAI API.

Multi-Aspect Data Lab   *March 2022 - September 2022*
Student Researcher

· Researched applications of tensor decomposition with deep learning models for anomaly detection in graph networks.
· Implemented and fine-tuned GAN and AutoEncoder models via PyTorch and PyTorch Lightning with 90% accuracy.
· Applied for and received a fiscal award for $3000 via Google exploreCSR program and $5000 via the DSPath fellowship program to continue research.

Lawrence Livermore National Laboratory   *August 2021 - September 2021*
Research Developer - Fellowship Participant

· Collaborated with a multi-disciplinary team to develop an asteroid classifier from night sky survey images (ZTF).
· Conducted extensive pre-processing of the dataset, including generating new positive data samples from the original dataset to address class imbalance.
· Trained a CNN classifier with up to 94% testing precision via TensorFlow / Keras.

Dexcom, Inc.   *June 2020 - August 2020*
Software Engineer Intern

· Developed iOS applications to prototype new flagship app features, using Swift and Xcode.
· Implemented database functionality in prototype applications using GRDB and SQLite.
· Interfaced with an internal RESTful API to create a prototype push notification service, increasing projected user engagement by 40% based on a user survey.
· Wrote extensive technical documentation and tracked development issues in both Confluence and Jira.

PROJECTS

QandA | *MongoDB, Express, Node, React, Socket.io, Javascript*   *June 2023 - Present*

· Collaborated on the development of QandA, a MERN-based web application, revolutionizing expertise sharing into a user-friendly marketplace.
· Designed microservices and RESTful APIs, integrated with MongoDB, to manage user bookings, handle authentication, manage payments, and support other various functionalities.

Melanoma Detection | *PyTorch, CUDA, Scikit-Learn, Image Processing, Git*   *May 2022*

· Trained an accurate CNN model for melanoma classification with up to 80% accuracy using PyTorch.
· Implemented a PyTorch-based autoencoder for the compression of high-resolution skin sample images.
· Leveraged Bayesian optimization techniques to fine-tune the architecture and hyperparameters of both models.

PROFESSIONAL DEVELOPMENT

UCR-Engineering: Graduate Teaching Assistant   *March 2022 - June 2023*
ACM@UCR: Membership Chair, Event Manager   *March 2020 - March 2021*
Cyber@UCR: Ethics Director   *March 2020 - March 2021*