KIRAN SANDILYA

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EDUCATION:

University of Massachusetts at Boston - Masters, Computer Science. **August 2021 - Present**

Coursework: Neural Networks, Computer Vision, Software development, Mobile Applications, Computer Communication and Networks, Analysis of Algorithms, Database Systems, Graphics, Applied Deep learning for Medical Imaging, Object Oriented Programing.

SKILLS:

Programing - Python, C, Bash, Java, JavaScript, Algorithms, Data Structures, Machine Learning, Deep Learning, Data Visualization. Relational and No-SQL Databases, ETL, Visual Analytics.

Tools & Technologies – Spark, Kafka, Cassandra, Apache, REST APIs, Azure, GCP, Angular JS, Node JS, Vue JS, React JS, Selenium, GIT, Docker, Jenkin, Kubernetes, HTML, WebGL, Presto DB, MATLAB, Entity Framework.

AI & Data - SQL, U-net, Hadoop, TensorFlow, Mahatos, NiFi, Keras, Pandas, R, Scikit-learn, OpenCV, NLTK, NumPy, SciPy, Excel.

WORK HISTORY:

University of Massachusetts at Boston, *Teaching Assistant (For Bio-Medical Imaging, Software engineering)* **Jan 2023 - present**

- Mentored four teams for their undergraduate capstone projects, utilizing skills in JavaScript, databases, and programming languages such as Java and Python.
- Led the development of a trading-bot project, redesigning the database for Flux-Marine Company and creating a powerful zooming tool using Cornerstone JS and Open Sea Dragon.
- Contributed to the success of the Bio-Medical Imaging course by grading assignments and exams, providing feedback to students, and collaborating with instructors to develop course materials.

University of Massachusetts at Boston, *Research Assistant, Ubuntu, Python, U-Net, Apache, ETL.* **Sept 2022 - Present**

- Worked on the META llama project to mitigate bias and toxicity in large language models.
- Acquired expertise in image processing, data conversion, and segmentation.
- Collaborated effectively with multidisciplinary teams in a research setting.
- Achieved 90%+ identification rate in machine learning segmentation using Keras with self-generated training and testing datasets.

ConchTech, *Data Engineer, SQL, Python, Apache NiFi, AWS, Azure, GCP.* **Jan 2021 - May 2021**

- Developed Scalable databases capable of ETL processing using SQL and Spark.
- Worked on optimizing SQL queries and data transformations, which resulted in 35% improvement in query performance.
- Contributed to the development of data lake architecture using AWS services like S3, Redshift, Glue, Athena.

NanoMindz, *Data Engineer, Python.* **Mar 2020 – Jan 2021**

- Handled, automation of Pre-Processing and Categorization of data using python and concepts of machine learning.
- Developed coherent ML classification models based on client's requirements to improve the accuracy of data classification.
- Transformed handwritten texts into digital information by using data analytics in extracting business-specific information from handwritten texts.

Krishtech Software*, Software Developer, Python, Java, DB, JS, Selenium suite.* **May 2018 – Mar 2020**

- Developed and maintained web applications using Java, Spring MVC and Hibernate.
- Designed end-to-end systems using SQLite, NodeJS, and ReactJS for front-end development and support.
- Proficient in Object-Oriented Programming, debugging, interface design, and system administration and networks.
- Designed and implemented database schemas and queries using Oracle and MySQL.
- Built spam filter using Support Vector Machine classifier. Implemented automated testing using selenium suite.

PROJECTS:

Large Language Models Comparison Tool (*Tech Stack: LAMP, Python, Angular)*

- Developed a LAMP stack server-side technology on a single server.
- Implemented Python backend with NLP libraries (NLTK, Scikit-learn, PyTorch) for language model queries.
- Created frontend UI with custom filtering using ag-Grid for user queries and model results display.
- Utilized Angular libraries (PrimeNG, ngx-bootstrap, Angular Material) for custom filter comparison algorithm.

FlyEm: (*Tech Stack: Keras U-Net, CNN, DNN, Python)*

- Implemented Keras U-Net architecture with multi-train technique, resulting in increased accuracy and better predictions, and utilized Slurm job management for faster outputs and efficient use of computing resources.
- Employed advanced techniques in high-performance computing, including heterogeneous computing using CPUs and GPUs and TensorFlow, resulting in impressive computer vision results.
- Used traditional computer vision techniques iteratively, resulting in 90% noise-free labels, and prepared data using parallel processing techniques.

Tune-Convertor (*Tech Stack: React JS, Node JS, Django, HTML | for android device: Kotlin, Android SDK)*

- Developed an application that converts playlists between music platforms (Apple Music, Spotify, Amazon Music, and YouTube Music) using relevant API libraries (Spotipy, PyAppleMusic, Boto3, and YouTube Data API).
- Implemented a command-line interface (CLI) to collect user input and retrieve the playlist from the source platform using the appropriate API library.
- Used data conversion and manipulation methods to convert each track to the format of the destination platform, leveraging Python libraries to streamline the process.
- Created a new playlist on the destination platform using the appropriate API library and added the converted tracks to it.

Credit card fraud detection: (*Tech Stack: Python, TensorFlow)*

- Performed Machine learning and deep learning algorithms on credit card data set taken from Kaggle.
- Identified deep learning algorithm works the best when compared among both.