Navkar Jain

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TECHNICAL SKILLS

- **Programming & Scripting:** Python, Java, JavaScript, HTML, CSS, React.js, Django, Flask, Node.js, and Spring Boot.
- **Frameworks & Libraries:** NumPy, TensorFlow, Keras, Scikit-Learn, JSP, PyTorch, Transformers, Kafka, Junit.
- **Databases & Tools:** SQL, MongoDB, AWS RDS (MariaDB), Oracle, Jira, WordPress.
- **DevOps & Cloud Services:** AWS (EC2, Lambda, S3), Azure, GIT, Docker, Kubernetes.

PROFESSIONAL EXPERIENCES

Software Developer | *VDC at UMass Boston* | *Boston, MA* *(Mar'23 - Present)*

- Updated and extended webpages using Divi WordPress ensuring 100% updated information and better user experience.
- Developed a migration script for over 30,000 files with Microsoft Graph API, streamlining and enhancing file retrieval by 50%.
- Revolutionized ROI analysis by automating reports in Python mapping 6+ years of data and reducing manual time by 75%.

Backend Engineering Intern | *Building Assure PBC* | *Concord, MA (Remote)* *(Fall '23; Fall'24)*

- Optimized efficiency by redesigning an alert generation script through Azure functions, dynamically handling 20+ alerts.
- Incorporated depth-first-search algorithm and data frame to solve nested conditions and scalability problems by O(Vertices).
- Developed RESTful APIs for utility consumption, facilitating data-driven decisions and reducing consumption costs by 20%.

Senior Software Engineer | *Radix Analytics Pvt. Ltd.* | *Ahmedabad, India* *(Nov '18 - Jul '22)*

- Led backend development of the RisQ model for a fintech company, leveraging Django MVT and Agile methodology, resulting in ₹25 Lakh monthly revenue.
- Optimized performance by implementing a scalable scoring system for 15,000 companies, processing data from over 60 tables to generate daily scores dating back to 2015.
- Enhanced system efficiency by 80% through optimized Pandas DataFrame and Redis integration, reducing database calls and enabling server-side parallel processing.
- Improved frontend features including server-side rendering, REST API integration, and SSO, increasing data accessibility and system interaction by 90%.
- Streamlined reporting by creating a Kafka-based process to generate ~1,000 reports daily, reducing reporting time by 50%.
- Boosted user engagement with data visualizations using JavaScript and Plotly, advancing ad management capabilities and analysis by 35%.

RESEARCH

- **User-Centric Adaptive Regularization** (*Ongoing*): Developing adaptive regularization techniques to reduce popularity bias in collaborative filtering systems.
- **Fairness-Aware Explanations in Recommender Systems** (*Ongoing*): Proposing multi-dimensional explanations to enhance fairness in recommendation algorithms.

ACADEMIC PROJECTS

Medical Chatbot | *University of Massachusetts Boston* *(May '24 - Sep '24)*

- Developed a RAG pipeline using langchain, faissDB and GroqCloud to access the Llama 3 model and indexed 100+ site info.
- Classified a user query to a medical related question by exercising with several prompting techniques.

Mashup Tag Recommendation| *University of Massachusetts Boston* *(Jan '24 - May '24)*

- Developed a mashup tag recommendation system, utilizing Llama 2, Mistral LLMs, and a Transformer model to analyze ~6,000 mashups, enhancing tag description accuracy and content understanding.

EDUCATION

University of Massachusetts Boston

PhD in Computer Science | GPA: 3.93 *(Sep '24 - May '27)*

- *Experience*: **Graduate Teaching Assistant** for Intermediate Computing with Data Structures for Fall '24.

Master of Science in Computer Science | GPA: 3.93 *(Sep '22 - May '24)*

- *Courses:* Analysis of Algorithms, Computer Vision, Machine Learning, Object-Oriented Programming, Database App Development.
- *Experience*: **Graduate Teaching Assistant** for Intro to Engineering, Circuit Analysis, and Senior Design Project for Spring '24.