Vishal Paul

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PROFESSIONAL EXPERIENCE

Senior Software Engineer   **February 2023 – Present**
PayPal Inc.   *Wilmington, Delaware*

- Engineered scalable Java solutions for Cosmos AI Enterprise Decision Management (EDM) team.
- Initiated and implemented caching strategies for use cases with offline models optimizing P99 latency by 50%.
- Improved memory usage and garbage collection by 80%, optimizing capacity for 400M+ daily traffic.
- Led end-to-end implementation of AI-driven personalization models use-cases, boosting annual revenue by $2M across key products (Venmo, PayPal, Infinite Scroll, Payments, Checkout).
- Built a Java-based automation tool, streamlining user testing processes and reducing manual effort.
- Identified a critical gap in query response times; created a Deepseek-R1 chatbot for EDM, cutting query resolution time from 2 days to 4 hours. Also implemented key features such as OCR and summarization on media/texts in slack threads.
- Collaborated closely with Product, Risk, and Data Science teams to identify and implement high-value use cases.

Machine Learning Platform Intern   **May 2022 – August 2022**
PayPal Inc.   *San Jose, California*

- Designed and developed Spring and Flask based ML model inferencing web application; reduced processing time from 1 hour to 2 seconds by employing multi-threaded asynchronous processing.
- Researched on efficiently deploying Image and Video classification models using Seldon-core and Docker.

Software Engineer II   **February 2019 – July 2021**
Cisco Systems Inc   *Bengaluru, India*

- Developed and maintained Java Spring-based Athena and Hybrid-Logging microservices for WebEx video mesh analytics.
- Led system upgrades, bug fixes, and feature development using Spring, InfluxDB, Kafka, Docker, Jenkins, and ELK.
- Spearheaded continuous integration in production and FedRAMP environments via Jenkins.
- Built a media quality analytics dashboard using Django and ReactJS for Meetings SRE team.
- Enhanced incident response by analyzing real-time application and server metrics in Grafana, improving system reliability.

Software Engineer   **August 2017 – February 2019**
Wipro Technologies   *Bengaluru, India*

- Developed Rest API based web applications for Wipro Holmes AI and automation platform applying Spring, flask, and PostgreSQL.
- Carried out end-to-end implementation of POC for extracting text from United States' 50 driving license templates. Employed OCR technique using Keras and Python, with an accuracy of 95%, hence reduced E-KYC process timeline by 3 days.

Software Engineer Intern   **January 2017 – July 2017**
Nvidia   *Pune, India*

- Engineered a web application for inspecting bugs and generating reports, dashboards, and scheduled email delivery system utilizing ASP.Net framework and MySQL database.
- Introduced features to identify pending bugs, regression bugs, and turnaround time in DirectX team; thus, streamlining management workflow in triaging, tracking, assignment, assessment, and reporting.

SKILLS

- **Programming Languages:** Java, Python
- **Frameworks & Technologies:** Spring, Django, Flask, ASP.Net, Kafka, TensorFlow, React
- **Cloud & DevOps:** AWS, GCP, Azure, Docker, Kubernetes, Jenkins
- **Databases:** MySQL, PostgreSQL, InfluxDB
- **Tools:** Git, ELK Stack, Apache SOLR, Seldon-Core, DSL Framework

EDUCATION

University at Buffalo, The State University of New York   **August 2021 – December 2022**
Master of Science (MS) in Computer Science   *Buffalo, NY*

Birla Institute of Technology, Mesra   **July 2013 – June 2017**
Bachelor of Engineering (BE) in Information Technology   *Ranchi, India*

ACADEMIC PROJECTS

Monitoring and Predicting Social Unrest   **UB, Spring 2022**

- Extracted number of fatalities, event type, sub-event type, etc. from summary of reported events by implementing NER.
- Generated an ACLED style summary of reported events given various information fields related to it.
- Trained a Dual-GRU model that can predict protests from ACLED style dataset with an average accuracy of 68%.

LabRet - Covid-19 Twitter Data Analysis [Django, Apache Solr, HTML/CSS, AWS comprehend]   **UB, Fall 2021**

- Developed a faceted search engine for fetching tweets related to covid-19 and vaccines consuming Twitter APIs and indexed in Apache Solr for Boolean retrieval.
- Incorporated BM25 and Vector Space Models to rank relevant documents for a search query. Integrated dashboards in web UI to analyze data and gather meaningful insights.
- Adopted AWS comprehend sentiment analysis to study attitude of general population towards Covid and vaccines.