Apoorva Jaiswal

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EDUCATION

Visvesvaraya Technological University, India   **Aug 2014 – June 2018**

Dayananda Sagar College of Engineering

Bachelor of Engineering in Computer Science and Engineering
CGPA- 8.404/10

Relevant Coursework - Design and Analysis of Algorithms, Graph Theory and Combinatorics, Discrete Mathematical Structures, Data Structures with C, Operating Systems, Database Management Systems, Operations Research, Java & J2EE, Compiler Design, Unix System Programming, Advanced Computer Architectures.

TECHNICAL SKILLS

Python, Java, C,SQL, Natural Language Processing, Deep Learning, Machine Learning, AWS, Kafka, Spark, Git, Terraform, Elasticsearch

JOB EXPERIENCE

JP Morgan Chase & Co. Bengaluru, Applied AI/ML Associate   **Nov 2020 – Present**

• Built a high accuracy industry classification model and established an on-demand consumption pipeline.

• Built a recommendation model to help bankers identify potential clients. Designed and developed the consumption pipeline for the model in AWS.

• Developed an automated ML pipeline, the first for AWS based deployments in Commercial Banking.

JP Morgan Chase & Co. Bengaluru, Associate Software Engineer   **July 2018 – Nov 2020**

• Automated a manual process of 6 weeks to be executed in 15 minutes by designing and building a single click file ingestion platform using Angular and Spring Boot, with CI/CD and hosted it on Cloud Foundry.

• Built a highly configurable and accurate Data Quality Engine, designed to work with Apache Spark, Impala and Oracle.

• Developed frameworks for Apache Kafka and Spark Streaming based data ingestion in near-real time.

RESEARCH EXPERIENCE

Harnessing label semantics to extract higher performance under noisy label for Company to Industry matching: Researched on methods to identify similar industries and extrapolated it to be used for company to industry matching process. Given a company business description, the system outputs a set of industry tags that correspond to the company.

My Contribution - Trained RoBERTa on domain centric data and used it to train a sentence transformer on regression objective function with mean square error loss. Utilized minimum labeling strategy to train the model effectively with less data. Achieved 30% average precision and 99% average recall on cases where noisy labels were completely incorrect and overall 8% gain in precision and 53% gain in recall over noisy labels.

Kalpayita - A Machine Learning Approach to Interior Designing: Researched on Text to 3D scene conversion methods and developed a desktop application for Interior Designers. The code is in Java and utilizes Stanford CoreNLP pipeline for processing input text. After the text is processed, a scene graph is created and rendered on a desktop application using JMonkey.

My Contribution - Derived the probabilistic models for object relations in the scene graph and used them for Scene Parsing, Scene Type Inference and Scene Modification. Used Linear Algebra for scaling in 3D space in Scene Generation and Scene Modification. Optimized the SOTA systems on time and accuracy and included human-in-loop to collect ratings to render better scenes in the future. ([Demo])

PROJECTS

Indian Sign Language Gesture Recognition: A desktop application that identifies Indian Sign Language gestures from video and image. It is optimized to allow real time training for new gestures. ([Demo])
My Role - Machine Learning and Backend Developer.

STAR (Smart TrAuma Reliever) App: A mobile application that predicts the section from the Indian Constitution that got violated, given the input dialogue which is a narration of the incident suspected to be of criminal nature.
My Role - Machine Learning and Android Application Developer

EasyCash: A mobile application built for the audience who find online payment difficult. It makes sending and receiving money as simple as sending a message. It uses Unified Payments Interface for all transactions. ([Demo])
My Role - Machine Learning and Android Application Developer

HelpIn: A chatbot made to help users by enabling a gamified guided usage of the LinkedIn mobile application for LinkedIn's Wintathon-2016.
My Role - Machine Learning and Android Application Developer

PUBLICATIONS

Harnessing label semantics to extract higher performance under noisy label for Company to Industry matching - Workshop on 'Small Data, Big Opportunities: Making the most of AI' at 3rd ACM International Conference on AI in Finance 2022 ([Link](#))

Kalpayita - A Machine Learning approach to Interior Designing - International Journal for Scientific Research & Development 2018 ([Link](#))

CERTIFICATIONS

Indian Institute of Science - Center for Continuing Education: Mathematics for Machine Learning
Udemy: Machine Learning A-Z: Hands on Python & R in Data Science
Coursera: Machine Learning by Andrew NG
Google: Applied CS with Android

AWARDS AND RECOGNITIONS

• 1st place in DCB Fintech Hackathon-2017 held on 4th and 5th of November 2017.

• 3rd place in MSHACK-2019 held on 19th and 20th of January 2019.

• Secured 9th position in the Global JPMC AWS Deep Racer event in November 2020.

• Secured 5th position among 100+ projects at JPMC Global Hackathon in June 2022.

• Certificate of Recognition at Line of Business level in JPMC for *'outstanding team performance and lasting contribution'* awarded on 9th of September 2019.

VOLUNTEER EXPERIENCE

• Subject Matter Expert for incoming college graduates in India since 2019 at JP Morgan Chase & Co.

• Mentor for differently able during 2019 in JP Morgan Chase & Co.

• Coordinator at university's Microsoft Innovation Lab, August 2016 to June 2018.

• Organized and taught in the 'Android for Beginners Workshop' in university on 19th and 20th of August, 2017.

• Member of Women Techmakers Google.