Mukesh Kumar

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Experience

Software Development Intern Jun. 2023 – July 2023
J.P. Morgan Chase & Co.
- Designed and implemented robust and scalable applications utilizing AWS Cloud services, with a primary focus on AWS Lambda and AWS EventBridge.
- Developed Flask-based API endpoints to provide actionable insights within the application, contributing to optimized resource allocation and cost reduction.

Software Developer Dec. 2022 – Jan. 2023
HotNot Inc.
- Devised and executed a matching algorithm, strategically pairing creators with registered users based on predefined criteria and preferences.
- Enhanced platform functionality by creating and integrating multiple views utilizing the Django framework, resulting in improved efficiency and user experience.

Education

B.Tech in Computer Science and Engineering with Specialization in AI Aug. 2020 – Present
Amrita Vishwa Vidyapeetham, Chennai Campus *Chennai, India*
CGPA: 9.3/10.0

High School June 2018 – July 2020
Vidyaa Vikas International School *Namakkal, India*
Percentage: 91%

Projects

Adverse Drug Effects Prediction | *TensorFlow, ReactJS, FastAPI, AWS*
- Implemented a KNN model to predict adverse effects of prescribed drugs by analyzing preprocessed data.
- Leveraged AWS Medical Comprehend and Amazon Textract to extract crucial medical data from prescriptions.

Metabolic Pathway Prediction | *Python, Flask, PyTorch, REST API*
- Engineered a Graph Convolutional Network model to predict pathway classes, utilizing graph-based data analysis.
- Designed a Flask-based web application hosting a REST API, providing streamlined access to prediction results.

MBTI Indicator-Based Personality Prediction | *Python, Flask, NLTK, Scikit*
- Developed a web application for personality prediction based on the 16 MBTI personality type indicators.
- Implemented a logistic regression model for classifying types and performed data augmentation to balance the training data.

Technical Skills

Languages: Python, C/C++, Java, JavaScript, R, MATLAB
Frameworks/Libraries: React, Node.js, Flask, Django, TensorFlow, PyTorch, FastAPI, Flutter
Developer Tools: Git, AWS, Azure, Docker, Kubernetes

Achievements

- Winner of Code For Good 2022 hackathon organized by JP Morgan Chase & Co.
- Winner of DataDev Spring 2023 Hackathon organized by Tableau, Salesforce Inc. Project: DataConnect
- Winner of Slimplicity hackathon organized by Slim.AI. Project: Beyolix
- Winner of Pangea Securathon. Project: Zeropay
- Served as Vice President at Cognizance, a technical club, mentoring over 50 students and organizing hackathons.

Publications

Variational Autoencoder—General Adversarial Networks (VAE-GAN)-Based Model for Ligand Designing. Lecture Notes in Networks and Systems, vol. 473, chapter 64. Springer Link

Metabolic Pathway Class Prediction Using Graph Convolutional Network (GCN). Lecture Notes in Networks and Systems, vol. 689, chapter 43. Springer Link