Vaibhav Mathur

vaibhavmathur97@gmail.com | +1 848-437-1438| linkedIn/vaibhav-mathur-188a85128 | github/smellycattt

EDUCATION

MS Computer Science NJ, US | 2021- 2023
Rutgers University
B.E. Electronics and MSc Mathematics Pilani, India | 2015- 2020
BITS Pilani

WORK EXPERIENCE

THEOM.AI | Software Engineer San Jose, CA | Jun 2023 – Present

- Leveraged Presidio, an open-source anonymization tool, to enhance Python-based entity classification, increasing detection accuracy for sensitive data (SSNs, addresses, emails) by 25%. Implemented custom models and regex for diverse address formats, cutting false positives by 15% and boosting data compliance.
- Increased system reliability and reduced job overlap incidents by 40% by optimizing Kubernetes job scheduling through init containers and YAML configuration adjustments.
- Led the development of over 15 Go-based API endpoints for Snowflake database interactions, complying with OpenAPI specifications, which boosted data writing throughput by 20%
- Excelled in optimizing and managing Arango and Snowflake databases, significantly enhancing UI responsiveness by implementing robust rules for dynamic panel population.

META | Software Engineering Intern Menlo Park, CA | June 2022 - August 2022

- Worked on the problem of Semantic Similarity for Integrity violating posts like hate speech, violence, nudity etc from facebook and instagram traffic.
- Trained a multi layer transformer head on 5 million posts that helps capture semantic similarity in embeddings improving 2% over baseline for retrieval accuracy and recall metrics

CITI | Software Developer Pune, India | Aug 2020 - July 2021

- Developed and deployed an Arbitrage calculation software that identifies opportunities across cash, equity, and FX markets, enhancing trading efficiency and response time.
- Worked on the development of security platform for migration of client accounts to a more secure platform which increased the level of security and transparency

ENERGY RESEARCH INSTITUTE | Research Assistant Singapore | Aug 2019 - July 2020

- Worked on Prediction of accelerometer features using time series data using LSTM, CNN and other state of the art ML models to enhance the performance and durability of accelerometer parts of cars by analysing real time data from sensors.

PROJECTS

OCCULOMOTOR SYSTEM FOR FACE TRACKING ROS, SNN, Neuromorphic Computing
As my Masters Thesis, I designed a robotic head with 6 degrees of freedom which mimics the human occulomotor system for laser and face tracking at the COMBRA lab. The model uses spiking neural network and is deployed on loihi board which enables the training of the neuromorphic network.

SKILLS

Languages: Go, Python, C++
Databases and Cloud Technologies: SQL, Postgres, TSQL, AWS, Azure, Snowflake, AWS, Databricks
Tools, Libraries and Frameworks: Git, OpenCV, Pytorch, CUDA, CI/CD, Docker, Kubernetes, Django, Pandas, Linux, Bash, .NET
Web Development: React, Node.js, TypeScript, HTML/CSS

PUBLICATIONS

Comparison of soft computing paradigms for automatic humour detection in Tweets *IEEE INDIACom'19*
Key Generation in A5/1 Encryption Algorithm using Versatile LFSR Circuit *IEEE ICSPVCE DTU'19*