Vineeth Raj

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Education

National Institute of Technology, Tiruchirappalli   *Graduation: May 2021*
Bachelor of Technology, Electronics and Communication Engineering, Minor in Computer Science
GPA: 6.36/10
Relevant Coursework: Artificial Intelligence, Data Structures and Algorithms, Pattern Recognition, Operating Systems, Optimization Techniques, Digital Signal Processing

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Work Experience

LTIMindtree
Software Engineer   *June 2022 – Present*
- Spearheaded the development and implementation of sophisticated predictive modeling strategies tailored to the dynamic nature of the stock market on a cutting-edge website platform.
- Leveraged comprehensive datasets sourced from prominent Indian Stock Exchanges including BSE and NSE to craft predictive models forecasting next-day stock prices, as well as weekly average stock prices, with a remarkable accuracy rate of 95%.
- Devised actionable recommendations for users, delineating optimal buying and selling strategies alongside precise quantity predictions, thereby empowering investors to capitalize on lucrative opportunities and maximize profits within the market.
- Orchestrated seamless collaboration with backend engineers to architect robust data pipelines, ensuring the fluid integration and efficient processing of real-time market data.
- Instrumental in elevating the platform's efficacy and user engagement through the continuous refinement and enhancement of predictive algorithms, thereby fostering a superior user experience and bolstering the platform's competitive edge within the realm of online stock trading.

IHS Markit (S & P Global)
Associate Software Engineer   *July 2021 - Mar 2022*
- Spearheaded data science initiatives within the Counterparty Manager - Onboarding Accelerator project, leveraging advanced analytics techniques to optimize client onboarding processes for financial institutions.
- Part of the development and implementation of data cleansing and standardization algorithms to ensure the accuracy and consistency of client data throughout the onboarding process.
- Designed and deployed machine learning models for risk assessment and compliance, enabling automated decision-making tasks such as classifying counterparties based on risk levels and flagging potential compliance issues.
- Utilized predictive analytics techniques to forecast future onboarding needs based on historical data, enabling proactive resource allocation and strategic planning.
- Collaborated closely with cross-functional teams, including software engineers, and business stakeholders, to integrate data science solutions seamlessly into the Counterparty Manager platform.
- Contributed to continuous improvement efforts by monitoring performance metrics, identifying areas for optimization, and implementing data-driven enhancements to enhance the efficiency and effectiveness of the onboarding process.

Botter Solutions Pvt. Ltd.
Data Scientist Intern   *May 2020 - Jun 2020*
- Developed an Instagram Influencer Recommender System, utilizing a multi-faceted approach to curate personalized recommendations for users.
- Conducted comprehensive data scraping from public profiles across diverse categories including Fashion, Food, Travel, etc., ensuring a rich and varied dataset for analysis.
- Employed advanced machine learning techniques, including efficient-net models, to scrutinize profile content and distinguish between authentic posts and deep fake content, thereby safeguarding the integrity of the recommendation process.
- Leveraged state-of-the-art transformer models such as BERT and RoBERTA to assess comment authenticity, discerning between genuine interactions and automated bot-generated responses, thereby enhancing the quality and reliability of user engagement.
- Integrated insights gleaned from content analysis into a multi-criteria Collaborative Filtering Model, culminating in the generation of a comprehensive scorecard that succinctly encapsulates each influencer's suitability for individual user preferences.
- Demonstrated exceptional efficacy of the recommender system through outstanding results, underscoring its value as a robust tool for facilitating informed decision-making and enhancing user satisfaction within the realm of social media influencer marketing..

Projects

Project Leader, Automated Interview Platform, Global Hackathon (Solvathon) by LTIM, 2023
- Led the development and implementation of an innovative Automated Interview Platform aimed at streamlining the recruitment process and enhancing candidate assessment efficiency.
- Collaborated with cross-functional teams to design and deploy AI-driven algorithms for resume shortlisting, candidate evaluation, and offer negotiation.
- Designed and implemented a multi-stage interview process, including MCQ, descriptive, coding, and project-based rounds, leveraging

AI technologies for automated evaluation.
- Integrated advanced features such as face emotion recognition and strict proctoring measures to ensure fair and accurate assessment of candidate performance.
- Orchestrated the automation of offer discussions, enabling seamless communication between candidates and AI-powered systems for efficient candidate selection.
- Monitored and optimized system performance, ensuring reliability, scalability, and adherence to data privacy regulations.

Project Leader, Occluded Face and Emotion Recognition System, 2021
- Led a team of three in the development of an innovative occluded face and emotion recognition system aimed at addressing challenges posed by mask-wearing during the COVID-19 pandemic.
- Spearheaded the conceptualization, design, and implementation phases of the project, ensuring alignment with objectives and timelines.
- Collaborated with team members to leverage computer vision and machine learning techniques for accurate detection of faces and emotions even when partially occluded by masks.

Project Leader, Classroom Monitoring System, 2020
- Led the development of a comprehensive Classroom Monitoring System aimed at enhancing student engagement and academic productivity.
- Spearheaded a team of 3 in conceptualizing, designing, and implementing innovative features to address key objectives:
    - Enhanced attendance tracking through the implementation of a flexible biometric system, improving accuracy and efficiency in record-keeping.
    - Implemented real-time emotion and posture recognition algorithms to provide insights into student engagement levels during lectures, enabling teachers and administrators to tailor instruction to student needs.
    - Developed an Automatic Notes Taker functionality utilizing voice-to-text technology to generate detailed class notes, which were automatically sent to students' email addresses after each session, promoting accessibility and facilitating review.
- Conducted user testing and feedback sessions to iteratively refine system functionality and usability, resulting in a user-friendly and effective solution.

Project Member, License Plate Recognition and Campus Vehicle Monitoring System, 2020
- Developed a comprehensive system for automatic license plate recognition (ALPR) to enhance security and streamline vehicle management at the college campus gates.
- Integrated a real-time camera feed to capture and identify vehicle license plates, cross-referencing them with a campus database to authenticate staff and student vehicles.
- Implemented a notification system that sends alerts to users if their vehicle remains on campus for over an hour, escalating to the college warden with live location tracking and a warning message after two hours, requiring users to provide a valid reason for extended stay.
- Collaborated with a team of six to design, develop, and deploy the system, ensuring seamless integration with existing campus security protocols and enhancing overall campus safety.

Extracurricular Activities

Organizer, Deep Learning Workshop for Probe, ECE TechFest, NITT (2021)
- Led the organization and coordination of a prestigious Deep Learning Workshop as part of Probe, the annual technical symposium of the Electronics and Communication Engineering department at the National Institute of Technology, Tiruchirappalli (NITT).
- Collaborated with a team of peers to design and execute workshop logistics, including venue selection, scheduling, and participant registration.
- Facilitated the dissemination of cutting-edge knowledge and practical insights in deep learning to empower attendees with valuable skills and insights in this rapidly evolving field.
- Received positive feedback from participants, affirming the workshop's success in fostering learning and professional development within the student community.

Skills

Programming Languages: C, C++, Java, Python, Javascript, and Kotlin.
Frontend Frameworks: Bootstrap, Angular, ReactJS, Redux, Three.js, Babylon.js.
Backend Frameworks: Spring boot, Reactive Spring boot, Web Sockets, Spring-security, FastAPI, Flask, Node.js.
Machine Learning Frameworks: Numpy, Pandas, Scikit-Learn, OpenCV, Transformers, Pytorch, Tensorflow, Keras.
Data Visualization Tools: Matplotlib, seaborn, plotly, tableau, dash.
Database tools: MySQL, PostgresSQL, Mongo DB, MSSql.
Software: Jupyter Notebook, Android Studio, PyCharm, MATLAB, VS Code, IntelliJ.

Achievements
- **Winner** of the Solvathon, A global hackathon 2023, conducted by LTIMindtree, competing against 300+ teams from 10 countries.
- **Winner** of Software Domain in TransfiNITT 2020, an annual NITT Hackathon
- Bagged **Silver Medal** in the Pulmonary Fibrosis Progression competition (a deep learning competition) held by Open Source Imaging Consortium (OSIC), competing against 5k+ teams.