Shubham Vyas

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SUMMARY: Motivated data scientist with 6+ months of experience as an AI and Health Informatics Engineer. Passionate about building models that fix problems. Relevant skills include machine learning, problem solving, programming, and creative thinking.

- ***Languages*:** Java, JavaScript, Python, C++, C#, LaTeX, Markdown, HTML5, CSS.
- ***Tools, Databases, and OS*:** Anaconda, Visual Code Studio, Github, Eclipse, Node.JS, Express.JS, MySQL, Git, Django, React.JS, Firebase, Azure.
- ***Organizational Skills*:** Public Speaking, Entrepreneurship.
- ***Domains*:** Artificial Intelligence, Web Development.

EXPERIENCE:

- ***AI & HEALTH INFORMATICS Engineer, HOPS HealthCare, Ahmedabad*** ***(June 2022 - Nov 2022)***
  - **Led a team** of **5 members** to develop a machine learning model with live training to detect skin disease by images taken through any camera.
  - Working on a neural network-based model with live training to detect tumours in MRI and CT images of Prostate, calculating dice coefficient of ~0.70 on a dataset of 1000 images with masks.
  - Extracted information from patient and test data using python libraries, RegEx and dumped the patient and test details in JSON, resulting in a 50% reduction in data processing time. Provided an API to the UI development team for seamless integration.
- ***API Integration Engineer-Technical Support, GATE.IO, Remote (Part-Time)*** ***(Sept 2022 – Nov 2022)***
  - Managed an API's life cycle and was involved in the integration, implementation, and testing of 100+ API's.
  - Developed and implemented a technical support plan for Gate.io API clients, resulting in a 95% customer satisfaction rate.
  - Attended 200+ client calls and translated conceptual requirements into technical data and integration requirements with an accuracy rate of 98%.
  - Created and maintained all documentation, guides, and articles related to development based on APIs, resulting in a 50% reduction in client inquiries.
  - Worked hand-in-hand with the core engineers to resolve software issues by triaging, reproducing, documenting, and tracking all bug reports, resulting in a 75% reduction in reported bugs.

PROJECTS:

App for Skin Disease Detection ***(4 Months)***

- Architected a skin disease detection app using tensor-flow model with 87% accuracy. Works from android phone's camera used the Jester and Movie Lens datasets.
- Augmented images by adding 5 types of noise for data augmentation to compensate scarcity of data-set.
- Used neural network-based tensor-flow lite image classifier, to recognise up-to 10 different types of diseases.
- Trained the model with 24 different skin diseases and integrated the system with app using flutter.

Stock Market Prediction Using Deep Learning ***(4 Months)***

- Stock-price forecasting using Machine Learning model LSTM and calculated the RMSE at the end.
- Predicted future 'close' price of selected stock for the next 10 days and displayed using graphs.
- Predicted the 'close' price from 2016 to 2021 using the testing dataset, and displayed a test vs prediction graph for the period from 2021 to 2023. The model was deployed using Streamlit. *(In the process of writing a research paper to publish the findings)*

Remaining Useful Life in a Battery ***(1 Week)***

- Model building and predicting the Remaining Useful Life (RUL) using SVM(Support Vector Machine), XGBoost, RVM(Relevance Vector Machine) with an accuracy rate of 90% on a dataset of 10000 data point
- Deployed the model using Django, resulting in a 50% reduction in prediction time and improved scalability to handle an additional 2000 requests per minute.

"**A Futuristic Survey on Learning Techniques for IoT Security: Developments, Applications, and Challenges**" DOI: 10.36227/techrxiv.19642977.v1 ***(Survey Paper)***

- A detailed survey on IoT technology, possible threats & different techniques to prevent threats and secure the systems.
- Presented possible future approach to protect the IoT system from different treats and anomalies.

"**Big Data Analysis on Yelp User-Generated Reviews"** 2022 International Conference for Advancement in Technology (ICONAT); Electronic ISBN:(978-1-6654-2577-3) DOI: 10.1109/ICONAT53423.2022.9726108 ***(Research Paper)***

- Conducted the research on 300000+ entries containing user generated data on Yelp.
- Performed 10+ complex queries to get meaningful insights of the data.

"**Smart Energy Trading Mechanism through Blockchain Technology (SETMBT)**" (Accepted in Hindawi Publication, Journal: Security and Communication Networks) ***(Research Paper)***

- Presented the feasibility and benefits of implementing blockchain in micro-grids.
- The problems faced by the system are identified, and the regarded solution is discussed in the paper for trading the produced energy among the prosumers. The prosumers are the ones who can both produce and consume energy, and the proposed solution inspired by blockchain technology brings the inherent trust in the energy trading mechanism.

"**A Contemporary Club Membership Management System**" in the 2nd International Conference on Mathematical Modeling, Computational Intelligence (MMCITRE – 2021) ***(Conference Paper)***

EDUCATION:

M.S. in Computer Science and Engineering, **()** ***(expected January 2025)***
Institute: Santa Clara University

B.Tech. in Information and Communication Technology, **(3.76 GPA)** ***(May 2022)***
Institute: Pandit Deendayal Energy University – PDEU

AWARDS/ RECOGNITIONS/ VOLUNTEER WORK:

- **2nd, Hackathon - HACKBASH 2021**. AI/ML in the National Level Event organized by DSC (Developer Student Committee) Google, Gujarat, India.
- **2nd, Hackathon - Mined Hackathon**. In Smart Healthcare, Nirma University with in collaboration with SUNY Binghamton University, Gujarat, India.
- Performed the role of **social intern** at Sneh Foundation for a month - organized activities for underprivileged children and provided food and other educational facilities.
- Web Development and Designing virtual intern at Spark Foundation for a month - Developed a Full-stack banking system website, designed Frontend with the help of CSS and BOOTSTRAP, provided transaction feature with the help of PHP in Backend, stored user's data and transaction history with the help of MySQL.
- Software Engineering virtual intern at JP Morgan Chase & Co. for 2 weeks – Using J.P Morgan Chase framework and tools displayed the data visually for traders.
- Sponsorship sub-committee member for the Annual Tech-fest of the university, leading the associate sub-committee, constituting 30 events and attended by more than 3500 participants.
- Member of Computer Society of India.
- Led graphic design club as Head of Gaming Club (Respawn) at university for a year.