PRIYANSHU MALAVIYA

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Education

Pandit Deendayal Energy University, Gandhinagar, India   **2020-2024**
Bachelor of Technology (B. Tech) in Computer Engineering | CGPA: **9.8**   (expected)
Relevant Coursework: Data Mining, Operating System, DBMS, Data Structures, Software Engineering, Cloud Computing

Skills

Skills – TensorFlow-Keras, Pytorch, NumPy, OpenCV, Pandas, Scikit-Learn, Matplotlib, Computer Vision, NLP, Reactjs, Nodejs, Expressjs, Nextjs, Reduxjs, Pupeteer, BeautifulSoup, Flask, FastAPI, Gradio, HuggingFace
Tools – MS Office, Tableau, Jupyter Notebook, Anaconda, Git/GitHub, Prisma, AWS, Microsoft Azure, Docker, mlflow, DVC
Languages – C, C++, Python, Java, SQL, HTML, CSS, JavaScript, TypeScript, MATLAB
Databases – MongoDB, MySQL, Firebase, Appwrite

Publications.

- **Advancements in Environmental Sound Classification Using Machine Learning and Deep Learning Approaches on the UrbanSound8k Dataset**, The 7th International Conference on Image Information Processing (ICIIP -2023) – IEEE
- **Cyber Security and Data Mining: Detecting Malicious URL Using Data Mining Techniques**, The 2nd International Conference on Communication, Security and Artificial Intelligence (ICCSAI-2023) – IEEE
- **Classification of Online News Articles Using Optimized Deep Learning Models**, The 2nd International Conference on Intelligent and Innovative Technologies in Computing, Electrical, and Electronics (ICIITCEE 2024) – IEEE

Work Experience

Zeiierman Trading | Backend Developer   **Sep'23 - Present**
- Orchestrated the development of a scalable Node.js backend application, ensuring application reliability and meeting advanced functional requirements.
- Implemented a secure authentication system with role-based access controls, significantly enhancing data security and privacy.
- Custom-designed and integrated a Stripe payment system, enabled dynamic plan management capabilities, notably elevating the user transactional experience through streamlined payment processes.
- Successfully integrated MailChimp for transactional email communication, boosting user engagement and improving the communication flow along with TradingView Bot for providing indicator scripts to users automatically.

ISRO - Indian Space Research Organization | Research Intern   **Oct'23 - Present**
- Orchestrated Enhanced flood forecasting by integrating satellite data with deep learning and time series models, a project initiated at ISRO.
- Utilized Google Earth Engine for collecting and processing large-scale satellite data and implemented advanced deep learning and time series models in Python.
- Achieved a 73% improvement in flood forecasting capabilities over traditional methods.
- Demonstrated a state-of-the-art flood prediction system, emphasizing the synergy between technology and environmental resilience.

eInfochips (An Arrow Company) | Software Development Intern   **May'23 – Jul'23**
- Worked in a team of 3 and collaborated in developing a web-based communication solution akin to WhatsApp using NextJS, TypeScript, TailwindCSS, Socket.io, Prisma and MongoDB. Integrating various technologies for real-time communication capabilities.
- Led the design and implementation of deep learning models for motion forecasting, utilizing complex sensor datasets, providing insights into AI applications in real scenarios.

AlphaBI | Software Development Intern   **May'23 - Jul'23**
- Led the design and implementation of a SaaS product, starting with the scraping of over 60k hotel reviews from various sites using Pupeteer and BeautifulSoup, ensuring data accuracy and relevance.
- Apply data cleaning, processing and Fine-tuned prediction models using OpenAI, achieving significant enhancements in accuracy and relevance for the targeted dataset.
- Developed a real-time data processing streaming pipeline using Python-Kafka, delivering immediate insights to end-users.
- Managed frontend development task of inventory management system using Next.js, Prisma, Shadcn.ui, and MongoDB with a focus on user authentication, role-based access control authorization and third-party API integrations, substantially enriching the product's functionality.
- Worked on RIA-mailer, fixed existing bugs, refactor the whole code to typescript, added additional features.

Projects

PixelPioneer – SaaS AI Tool **GitHub**
Tech Stack - NextJS, Prisma, MongoDB, Typescript, Redux, Flask, HuggingFace, OpenAI, Deep Learning, Transformers
- Developed 'PixelPioneer', a comprehensive SaaS platform offering AI services like image captioning, Video captioning, text summarization, image and code generation using NextJS, Flask, and HuggingFace.
- Trained various Encode-Decoder, attention-based models along with fine-tuning of multiple models, including Blip and GIT, for image and video captioning tasks on Flicker8K dataset, achieving enhanced accuracy and contextual relevance.
- Utilized Hugging Face's pre-trained models for text summarization, implementing fine-tuning techniques to tailor outputs to specific project requirements.
- Integrated OpenAI's API for advanced image and code generation tasks, demonstrating proficiency in applying cutting-edge AI technologies. integrated Stripe payment, enabling secure and efficient transaction processing.
- Deployed backend models using AWS CI/CD and GitHub actions, resulting in a unified, user-friendly platform for diverse AI task.

Kidney Disease Classification Using Deep Learning and Computer Vision **GitHub**
Tech Stack - NextJS, Flask, Python, MLflow, DVC, TailwindCSS, Typescript, AWS CI/CD, Deep learning, transformers
- Developed a system for classifying kidney diseases using CT scan images with NextJS, Flask, and deep learning techniques.
- Employed a combination of custom, pre-trained and vision-transformer models for effective disease classification.
- Implemented MLflow for model tracking and DVC for data versioning; deployed using AWS CI/CD.
- Delivered a robust diagnostic tool for healthcare professionals, enhancing treatment planning and diagnostics.

Text Summarization **GitHub**
Tech Stack - NextJS, Flask, Python, MLflow, DVC, TailwindCSS, Typescript, AWS CI/CD, Deep learning, transformers
- Fine-tuned the Google/Pegasus-cnn_dailymail model on the SamSum dataset for efficient text summarization.
- Developed a Flask backend and integrated it with a Nextjs, TailwindCSS, and TypeScript frontend.
- Deployed using AWS CI/CD, resulting in a tool that provides concise and coherent summaries, enhancing user information consumption.

SkillShare - Course Sharing Platform with Interactive Admin Dashboard **GitHub**
Tech Stack - MERN stack, Reduxjs, Razorpay, Multer, Cloudinary
- Created a collaborative learning platform, using the MERN stack, focused on knowledge sharing and community building.
- Designed an interactive admin dashboard providing real-time analytics for course creators.
- Integrated Bcrypt, JWT, and Razorpay for enhanced security and secure transactions.
- The platform was acclaimed for its intuitive design and comprehensive features, revolutionizing online knowledge sharing.

OS - Page Replacement Algorithms Simulation **GitHub**
Tech Stack - React.js, JavaScript, HTML, CSS, Material-UI, Firebase, AWS
- Simulated various page replacement algorithms for educational and research purposes using React.js and Firebase during our coursework of Operating System.
- Lead the team of 5 people and developed an interactive UI to input page sequences and visualize algorithm efficiency.
- The tool became essential for understanding memory management in computer science education.

Certification & Achievements

- TensorFlow Developer Certificate
- IBM Academic Internship for Data Analytics
- Deep Learning Specialization by Andrew NG
- Google ML Bootcamp 2022
- Amazon ML Summer School 2022
- Samsung Solve for Tomorrow Hackathon 2022

Positions of Responsibility

TEDx PDEU 2023 | Web Development Lead	**Jan'23 – Apr'23**
ACM (Association for Computing Machinery) Student Chapter | AI/ML lead	**Mar'22 – Jul'23**
Google Developer Student Club | AI/ML lead	**Jul'22 – Jul'23**
Encode - The Computer Science Department Club | Web development lead	**Jun'22 – Jul'23**