Mihir Panchal

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EDUCATION

Dwarkadas Jivanlal Sanghvi College of Engineering
9.00 CGPA
Bachelor of Technology in Computer Engineering, Honors in Intelligent Computing
June. 2023 – June 2026

Shri Bhagubhai Mafatlal Polytechnic
9.45 CGPA
Diploma in Information Technology
June. 2020 – June 2023

EXPERIENCE

Undergraduate Research Assistant
December 2023 – Present
IIT Patna
Bihar, India (Remote)

- Scraped and annotated peer reviews from electronic venues such as ICLR, Open Review curating our dataset of 20000+ reviews for the research purpose. Performed citations in papers and got trained by an NLP expert.
- Developed multi-task models with 6 ablation variants, comprising SciBERT, BERT-Base, and Bi-LSTM, connected to multiple attention blocks to determine aspect categories and their sentiments for any given review.

Software Engineering Intern
June 2024 – August 2024
Infiheal Healthcare Private Limited
Mumbai, India (Remote)

- Leveraged advanced AI technologies to enhance machine learning model accuracy by 15% and developed classification models, resulting in a 20% increase in data processing efficiency, significantly improving decision-making.
- Utilized AWS services to improve system reliability by 25%, reduce infrastructure costs by 30%, and automate workflows, achieving a 40% reduction in processing time and a 20% increase in operational efficiency.

Full Stack Developer Intern
July 2022 – September 2022
Skillsvista
Mallow, County Cork (Remote)

- Architected responsive web components, resulting in a 30% improvement in page load times and a 20% increase
- Engineered RESTful APIs and models achieving 99.9% uptime and reducing API response times by 40%

PROJECTS

Engraph | Minor Project | [GitHub] [Website] [Youtube]
January 2023 – Present

- Engineered an AI Powered code documentation generator leveraging static code analysis and GraphRAG to create structured, LLM-enhanced documentation with dependency graphs.

CiteSpy | Downloads 100+ | [GitHub] [Marketplace] [Semantic Scholar] [Youtube]
August 2024

- Developed a Visual Studio Code extension that enhances coding and research efficiency by automatically scraping and displaying academic paper summaries, titles, and links, streamlining research workflows within the editor.

InsightHound | 100x Buildathon Winner | [GitHub] [Youtube]
December 2024

- Deployed an AI-driven research agent with LangChain, boosting startup decision-making efficiency by 126% through data-driven insights and actionable strategies for competitive advantage and product-market fit.

CodeLineLogger | Downloads 605+ | [GitHub] [Marketplace] [Website] [Youtube]
December 2023

- Visual Studio Code extension in JavaScript, featuring breakpoint logging, conditional logging, variable tracking, customizable log output formats, and levels, enhancing code analysis and debugging capabilities.

DealDex | Lines of Code Hackathon Winner | [GitHub] [Youtube]
April 2024

- Innovated an e-commerce platform with data aggregation, intuitive search, detailed comparisons, and actionable insights. Utilized web scraping for comprehensive product data and integrated AR/VR for immersive comparisons

STAMP Drone | Final Year Project Diploma | [GitHub]
January 2023 – May 2023

- Revitalized a drone control system using React and Flask that uses Tensorflow and Mediapipe for hand gesture recognition and Python with the YOLO algorithm for real-time object detection.

Technical Skills

Languages :   Python, JavaScript, C, C++, SQL, TypeScript, Java, Dart, C#
Frameworks : FastAPI, Flask, Django, OpenCV, TensorFlow, Langchain, React, React Native
Dev Tools :   AWS, GCP, Azure, Docker, Kubernetes, Hugging Face, Tableau, PowerBI, GitHub, Prisma
Libraries :   MongoDB, Postgres, Oracle, MariaDB, MySQL, Redis, SQLite, Firebase, Supabase

Research

Game Machine and Algorithm towards Trends in Game States using Machine Learning and Deep Learning | 2023 10th International Conference on Computing for Sustainable Global Development   DOI
- Developed a hybrid approach integrating machine learning and deep learning, utilizing Markov Chain models to analyze game states in chess, poker, cricket, and football.

Implementation of Hybrid Programming Approach Using Python for Cross Platforms Mobile and Web Application in Cloud Environment | IRJIET, Volume 7, Issue 8, August 2023 pp. 58-64   DOI
- Designed and implemented a hybrid architecture integrating Python, Dart, and Vue.js for cloud-based mobile and web applications, ensuring platform independence and agile development.

PeerGauge: a Dataset for Peer Review Disagreement and Severity Gauge | Language Resources and Evaluation, Springer   In review
- Developed PeerGauge, a dataset and baseline model for quantifying contradiction severity (-5 to +5) in peer reviews, aiding editors in resolving reviewer disagreements.

Not all peer reviews are signi cant: A Dataset for Good (Exhaustive) vs Bad (Trivial) Scienti c Peer Reviews Leveraging Chain-of-Thought Reasoning | Scientometrics, Springer   In review
- Developed InsightfulPeer, a dataset leveraging LLMs and Chain of Thought (CoT) reasoning to classify peer reviews based on thoroughness and actionable feedback

LEDGE : Leveraging Dependency Graphs for Enhanced Context-Aware Documentation Generation | Scientometrics, Springer   To be Published
- Developed LEDGE, a framework leveraging dependency graphs for enhanced context-aware documentation generation.

Blogs and Coursework

Technical Writer on GeeksForGeeks and Medium   GeeksForGeeks Medium
- Authored technical blogs on AI, AWS, multimedia processing, and hybrid programming, covering topics like Amazon SageMaker, ChatGPT cloning, DynamoDB automation, text-to-speech, and cross-language development with Python & Dart

Generative AI and Operational Security Coursework   Gen-AI Op-Sec
- Developed AI-driven and security-focused code for Generative AI and Operational Security coursework, implementing model fine-tuning, adversarial defense techniques, and secure AI deployment strategies

Talks

Why Research Papers? A Comprehensive Guide | DJSACM Research Seminar   Youtube
Leveraging Boto3: Pythonic access to S3 and SNS on AWS | Mumpy June Meetup 2024   GitHub Event
From Code to Community: Publishing PyPI Packages | FOSS United June Meetup 2024   GitHub
Unlocking the Power of Computer Vision with Mediapipe | Mumpy March Meetup 2024   GitHub Event
Mastering Python: A Hands-on Workshop for Developers | NMIMS Navi Mumbai   GitHub Youtube

Extracurricular Activities

Research Head at Association for Computing Machinery | DJSACM   Youtube
- Guided **50+** students in research methodologies and technical writing and Conducted **5+** workshops on research paper writing and technical skills.

Open Source Developer | Hacktoberfest 2022, 2023, 2024   Holopin
- Contributed to **15+** open-source projects, enhancing global developer communities and Earned **3** Hacktoberfest completion badges for consistent contributions.