

Chirag Manish Bolakani

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EDUCATION

University of California, Santa Cruz <i>PhD Computer Science Engineering (CSE)</i>	CA, United States <i>Sep 2026 - Present</i>
Vellore Institute of Technology, Vellore, India <i>Master of Computer Applications (MCA) CGPA: 8.93/10</i>	Vellore, India <i>Sep 2022 - Jun 2024</i>
K. C. College, University of Mumbai <i>Bachelor of Science in Information Technology (B.Sc. IT) CGPA: 9.5/10</i>	Mumbai, India <i>May 2019 - Jun 2022</i>

EXPERIENCE

SpotinfoAI <i>Software Engineer</i>	Remote <i>Aug 2024 - Jul 2026</i>
- Designed and implemented 100+ REST APIs for LLM-enabled applications using Django, JWT, Google OAuth 2.0, and asynchronous HTTP streaming. - Reduced LLM response latency from 8 seconds to 2 seconds through Redis and in-memory caching, prompt optimization, and backend improvements. - Developed real-time voice agents using streaming models, reducing initialization time from 10 seconds to 4 seconds through pipeline and configuration optimizations. - Built a RAG pipeline for PDF, CSV, Markdown, and web data, including document ingestion, metadata-aware retrieval, and low-latency vector search. - Deployed scalable AI services using FastAPI, Docker, AWS EC2, NGINX, Azure, and cloud data integrations, supporting real-time production workloads.	
Nokia Networks <i>Research and Development Intern</i>	Chennai, India (In-Office) <i>Aug 2023 - May 2024</i>
- Built a Django-based regression testing site with automated test re-runs and bulk comment updates, powered by a trained Machine Learning (KNN) model. - Built a CI/CD pipeline in Jenkins for ML-Ops tasks including data collection, cleaning, pre-processing, and training. - Hosted Django ML backend on Docker with mod_wsgi and Apache on Rocky Linux Server. - Developed visualization and analytical tools for processing Broadcom Distribution Point Unit (DPU) logs, enabling identification of anomalies associated with critical bandwidth issues. - Led effort-reduction initiatives, achieving a 25% decrease in manual interventions.	

TECHNICAL PROJECTS

Human Presence Detection Using RF Signals [Link]	Oct 2022 - Jan 2023
Developed a controlled-environment human presence detection solution using Received Signal Strength Indicator (RSSI) data from ESP32, applying descriptive statistical methods to analyse variations induced by human motion.	
Lung Capacity Check - Spirometry for Pulmonary Function Test [GitHub] [Link]	Oct 2021 - Apr 2022
Innovated a low-cost solution to calculate spirometry parameters by leveraging the Bernoulli-Venturi Principle and performing incentive spirometry; utilised MongoDB and Matplotlib to analyse patients' results.	
Automation Society Security Task [Link]	Dec 2020 - Mar 2021
- Extracted Channel State Information (CSI) from Intel IWL5300 NIC using Linux CSI Tool and ESP32 for Human Activity Recognition (HAR). - Applied Hampel Identifier and Moving Average on CSI data for preprocessing.	
Crop Health Analysis Using NDVI [Video]	Sep 2020 - Oct 2020
Calculated plant health using the Normalized Difference Vegetation Index (NDVI), combining RGB and NIR pixels using the PIL library in Python; developed a web-based system using Flask.	

SKILLS

- **Programming Languages:** Python, Java, JavaScript
- **Database Technologies:** MySQL Server, PostgreSQL, Oracle DB
- **Web Technologies:** Django, Django Rest Framework, Node.js, Express.js
- **Python Libraries:** NumPy, Pandas, Matplotlib, Plotly, Flask
- **DevOps:** Docker, Apache, Jenkins

ACADEMIC HONORS/AWARDS

Best Project Award, Code for Life Hackathon, VIT Vellore <i>Awarded Best Project among more than 100 registered teams and 400+ students.</i>	May 2023
My Applied Science Contest, VIT Business Incubation Centre <i>Secured 3rd position in the inter-department innovation contest.</i>	Mar 2023
Team Leader, Project DeepBlue, Mastek <i>Achieved 2nd Runner Up at Mastek's Deep Blue Season 7 among 282 registered teams.</i>	Oct 2021 - Mar 2022
Team Leader, Devsoc'21, CodeChefVIT, Vellore Institute of Technology <i>Won Devsoc'21 among 500 participating teams from across India.</i>	Apr 2021 - May 2021
Team Leader, SIH Internal Hackathon 2022, KC College, Team Rand0m6 <i>Spearheaded the team to 2nd position at the SIH KC College Internal Hackathon.</i>	Feb 2022 - Mar 2022