

SHREYASH BHATKAR

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130, Lane 3, Jalaram Nagar, Amravati – 444606, Maharashtra, India.

EDUCATION

B. Tech. in Electronics and Telecommunication Engineering | **CGPA: 8.82** **Aug 2019 - May 2023**

Savitribai Phule Pune University - Vishwakarma Institute of Technology (VIT), Pune

Coursework: Neural Networks, OS, Design and Analysis of Algorithms, Data Structures, Computer Vision, Data Science, Cloud Computing, Digital Design, Object Oriented Programming, Database Management, Web Development

SKILLS

Languages & HDL: Python, Java, C/C++, Rust, JavaScript, SQL, Bash/Shell Script, ARM/x86 Assembly

Tools & Frameworks: Linux, Git/GitLab CI, Docker, Kubernetes, Helm, Prometheus/Grafana, TensorFlow, PyTorch (ONNX, OpenCV), AWS, OCI, GCP, Cosign image-signing, RESTful APIs, Java Microservices

WORK EXPERIENCE

Oracle India Private Limited - Associate Consultant for Software Development **Jul 2023 – Present**

Java Developer | Batelco Project *(Jan 2025 - Present)*

- Architected **30+ Java/Kotlin micro-services** and **REST endpoints** on Oracle Cloud Infrastructure.
- Building **LangChain + Cohere** documentation agent on **OCI**; projected to cut API onboarding time by **40%**.
- Optimized **REST/gRPC** microservices that interface with **5G** core functions (NRF, PCF) and **Wi-Fi** controllers, containerizing with **Helm + Istio** to boost throughput **37%** and reduce latency by **12%**, measured via **Prometheus**.

Full Stack Developer | PPC Retail Project *(Jul 2023 - Dec 2024)*

- Written **6+** reusable **BRM opcodes** across multiple projects, driving **35%** increase in billable profit/allocated resource.
- Delivered **13+** billable solutions, enhancing the user experience for the PPC project using **OJET** and **Node.js**, implementing full-stack optimizations that reduced per-module load time by \approx **23 %**.
- Engineered server-side and serverless rendering solutions in PPC-Retail project with **30+ reusable APIs**, increasing scalability and reducing backend server load by **17%**, as measured via **Prometheus**.
- Authored more than **13 Confluence articles** bolstering shared knowledge and **led** a team of 3 on a critical project, reducing onboarding time by **160 hours** for 4 new billable team members.

Nibha Tech Solutions LLP | Artificial Intelligence Research Intern

Dec 2022 – May 2023

Project: National Mutual Funds Performance Prediction Tool

Nashik, India

- Compiled a set of **30,000+** feature vectors based on market metrics from past 25 years of statistical data.
- Leveraged **MACD** and **Bollinger Bands** with the **SARIMA** model and **SHAP** for more precise insights.
- Tested the model with **GANs** for synthetic data, **Backtrader** for scenario-based backtesting, and **MLflow** for benchmarking to yield **96.2%** accuracy in normal and **76.03%** in simulated calamitous scenarios.
- Worked on the backend, integrating **15GB+** data pipelines and implementing APIs for real-time predictions.

PROJECTS

Stun Shoe: Low-Power System (Wearable for Women's Safety) | [Repository](#) **Aug 2020 – Present**

- Integrated **piezo- triboelectric** energy-harvesting module that generates \approx 10–50 mW/stride. (verified on protoboard)
- Designed **ARM-M0 + BLE** board (32 kB flash) to drive a non-lethal actuator from a hybrid EDLC Li-Po power stack.
- Gathered **40,000+** footfall pattern data points with **FlexiForce** and **Adafruit Data Logger Shield** for model training.
- Implemented **on-device reinforcement-learning controller** (DQN & PPO) that classifies routine vs. high-risk footfall patterns with **93 % F1-score** and triggers the actuator only when threat probability $>$ 0.8 to reduce false positives.

Real-time Cloud Performance Analytics and Optimization App | [Repository](#) **May 2024 – Aug 2024**

- Seamlessly integrated **Python Flask** with **CORs** setup, handling **8+ GBs** of real-time data logs.
- Crafted an predictive analytics model using **MLlib & Apache Spark**, which boosted resource efficiency by **22%** and led to **15%** reduction in **operational downtime in OS**.

- Built a real-time, responsive dashboard using **Oracle JET** and **Node.js**, reducing load time by **33%**.
- Deployed on **Oracle Cloud** with **Oracle Kubernetes Engine (OKE)**, to ensure scalability and performance.

Forest Fire Detection and Prediction via RCNN | [Publication](#)

Jan 2022 – Apr 2022

- Curated a dataset of **10,000+** raw images; applied data augmentation using **OpenCV** to enhance robustness.
- Engineered a **custom RCNN in PyTorch**, reaching **97.3 % mAP** for early fire/risk stratification on unseen data.
- Designed a novel hyperparameter '**RTH Index**', calibrated on real-time humidity, temperature, and visual cues.
- Developed a real-time anomaly detection pipeline using **Kafka** for streaming sensor data (temperature, humidity, visual cues) and integrated **Apache Flink** for continuous analytics.

Real-time Bus Route Detection for the Visually Impaired | [Repository](#)

Oct 2021 – Jan 2022

- Self collected dataset containing **6,500+** raw images and performed data transformation using **OpenCV** methodologies to increase model specificity.
- Implemented **SIFT** and **ORB** to extract **500,000+** descriptors and local features from visual cues.
- Utilized dimensionality reduction techniques (**t-SNE**, **UMAP**) to enhance efficiency and reduce inference time.
- Implemented advanced feature extraction methods using **deep CNNs (ResNet)** combined with supervised learning approaches, achieving an accuracy of **93.5%**.
- Customized **Tesseract OCR** to enable seamless extraction and recognition of route numbers.

PUBLICATION AND PATENT

- "[Forest Fire Detection and Prediction from image processing using RCNN](#)." In ICEPTP'22 Lisbon, Portugal. Paper No. 204 indexed in Scopus and Google Scholar *World Congress on CSEE* (2022)
- "Stun-Shoe" women's-safety wearable– Indian Provisional Patent App. No. 2025/XXXXXX, filed Mar 2025 (full spec in preparation)

ADDITIONAL COURSES | [Link to Course Certificates](#)

Machine Learning by **Stanford University** (Grade: 96%) | Object Oriented Data Structures in C++ by **UIUC** (Grade: 96%) | Network Architecture by **Google** (Grade: 100%) | Containerization and Container Orchestration - **Kubernetes** | Unix and Linux Essentials | AI OPs - TM Forum | System Design by **O'Reilly** | Foundations of Cybersecurity by **Google** | Java SE: Programming II Ed 1 by **Oracle**

EXTRA-CURRICULAR ACTIVITIES

Google Developer Student Club VIT, Pune. | Team Head

Aug 2020 – Sep 2021

- Delivered a total **130+ hours of lectures** on Machine Learning, Flutter and Web3 to a batch of **35+ participants**.
- Collaborated with the team to organize **3 technical events** including Solution Challenge and DevFest.

Ekasutram VIT, Pune. | Executive Head

Mar 2020 – Mar 2023

- Framed **105+ coding and statistical questions** for the intra-state coding competitions.
- Facilitated **40+ lectures** on Neural Networks, Embedded AI and Graph Theory to enrolled students.
- Led the ideation and execution of **11+ events** including monthly coding contests, ML-Workshops and others.

Student Mentorship Program VIT, Pune. | Student Mentor

Mar 2020 – Feb 2022

- Mentored **73 1st year students** at VIT, Pune in academics & extracurricular activities.
- Organized workshops and info-sessions to bolster learning experience and foster a supportive community.

AWARDS AND CERTIFICATIONS | [Link](#)

- **1st Runner-up** in the Engineering Design and Innovation Contest with the project 'Stun-Shoe,' focused on women's safety. (The project report was selected for demo at IEEE student workshop on Edge-AI)
- **Best Quarterly Presentator/Solution Pitcher** - Oracle (Pune, India).
- **Innovative Thinker** - Batelco, Beyon Group.
- Oracle Certified **Generative AI Professional**. (Badge of Honor issued on Jun 2024)
- Oracle Certified **Data Science Professional**. (Badge of Honor issued on Nov 2024)
- Docker Certified Foundations **Professional**.
- Oracle Certified Associate for **Machine Learning** using **Autonomous Databases**. (Honor badge issued on Oct 2024)
- Oracle Certified **Cloud Infrastructure** Associate and **GitHub** Certified Career Essentials Professional.