

Shreyash Bhatkar

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EDUCATION

University of Illinois Urbana-Champaign (UIUC)

Champaign, IL

Master of Computer Science (MCS) · Expected Dec 2027

Intended focus: Distributed Systems, Machine Learning, ML Systems

VIT, Pune (Savitribai Phule Pune University)

Pune, India

Bachelor of Technology, Electronics and Telecommunication Engineering | CGPA - 8.82/10

Aug 2019 – May 2023

Coursework: Data Structures & Algorithms, Operating Systems, Databases, Cloud Computing, Object-Oriented Programming

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, SQL, C#

Backend & Systems: REST/gRPC APIs, Microservices, Flask, Node.js, Docker, Kubernetes, Git, CI/CD (GitLab), AWS

Machine Learning: PyTorch, TensorFlow, OpenCV, MLflow, SHAP

Data & Observability: Spark, Kafka, Prometheus, Grafana

WORK EXPERIENCE

Oracle Corporation (IN) - Associate Consultant for Software Development

Jul 2023 – Present

Java Developer | Project: Batelco

(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 | Project: PPC Retail

(Jul 2023 - Dec 2024)

- 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**.

PROJECTS

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**.
- 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

- 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.

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

Aug 2020 – Oct 2025

- Integrated **piezo- triboelectric** energy-harvesting module that generates $\approx 10\text{--}50$ 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.

AWARDS AND PATENT

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- **Above and Beyond** Award for Exceptional Contribution - Oracle (Pune, India).
 - Oracle Certified **Generative AI Professional**. (Badge of Honor issued on Jun 2024)
 - Oracle Certified **Data Science Professional**. (Badge of Honor issued on Nov 2024)
 - Oracle Certified Associate for **Machine Learning using Autonomous Databases**. (Honor badge issued on Oct 2024)
 - "Stun-Shoe" women's-safety wearable (Edge-AI and Embedded Systems) Indian Provisional Patent App.(full spec in preparation)