

Sudarshan Bhagat

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SUMMARY

Software Developer with proven expertise in Android and cross-platform app development (React Native, Firebase, MongoDB), AI model training (Python, TensorFlow, CNN, ResNet-50), and embedded system validation (Zephyr RTOS, FreeRTOS, device drivers). Validated AI models at SOUL AI, improving response accuracy by ~20% and reducing manual review workload by 15%. Led the development of an AI-powered shopping app at GGST Innovation, cutting app launch time from 2.8 s to 1.9 s and increasing 30-day user retention by 15%. Optimized embedded firmware at EATON, reducing post-deployment issues by 30% and improving system responsiveness by 25%. Experienced in full-stack development, real-time data processing, predictive modeling, and collaborative Agile workflows, with a record of delivering measurable improvements in performance, reliability, and user engagement across AI, mobile, and embedded domains.

WORK EXPERIENCE

SOUL AI

AI-Intern (Free Lance)

Pune, Maharashtra
11/2025-Present

- Validated AI and machine learning model responses daily, improving decision accuracy by ~20%, benefiting the internal product team, AI evaluation team, and end-users, using Python, NumPy, Pandas, and Scikit-learn.
- Trained AI models weekly on curated datasets of 25k–30k text samples from 50k+ prompts, combining proprietary and public data (Hugging Face, Kaggle) using TensorFlow, OpenCV, Jupyter Notebook, and Google Colab, reducing incorrect outputs by 15–20%.
- Collaborated closely with AI engineers, ML developers, and the product manager to define evaluation guidelines, sharing insights with the QA team to verify model outputs.
- Contributions helped reduce manual review workload for the product team by ~15%, accelerated feature testing and deployment, and increased response consistency across model versions, leveraging Git and Postman for version control and API testing.

GGST INNOVATION P.LTD

Android Developer (Full-Time)

Pune, Maharashtra
11/2025-Present

- Led a team of 5 interns to deliver an AI-powered shopping app 3 weeks ahead of schedule, reducing post-release defects by 22%.
- Developed features for co-shopping, combo deals, and scheduled shopping, serving 100+ active users.
- Built cross-platform Android and iOS apps using React Native, reusing 80% of code, reducing development time and improving app stability.
- Optimized the codebase and integrated Firebase and MongoDB, reducing app launch time from 2.8 s to 1.9 s and increasing 30-day user retention by 15%.
- Designed intuitive UI/UX, improving user engagement and overall shopping experience.

EATON

Firmware Intern

Pune, Maharashtra
03/2025 – 09/2025

- Executed full lifecycle validation of embedded systems using hardware-in-the-loop testing, oscilloscopes, logic analyzers, and multimeters, adhering to IEC 61508 safety standards, reducing post-deployment issues by 30%.
- Developed and integrated device drivers (GPIO, UART, I2C, SPI, CAN) on Zephyr RTOS and FreeRTOS, improving system responsiveness by 25% and enabling hardware modules to meet strict latency requirements.
- Collaborated in Agile sprints, owned firmware regression backlog, and delivered 12 story points per sprint, ensuring all milestones were completed on time.
- Optimized analog and digital circuits, minimizing PCB defects and integration delays, improving overall hardware reliability for end products.

EDUCATION

VISHWAKARMA INSTITUTE OF TECHNOLOGY

Bachelor of Technology

Pune, Maharashtra
01/2022-05/2025

Electronics and Tele-communication

Cumulative GPA: 7.84/10.0

Relevant Coursework: Data Structures & Algorithms, Embedded Systems, Operating Systems, Machine Learning, Artificial Intelligence, Database Management Systems

SANJAY GHODAWAAT JUNIOR COLLEGE

12th Science-State Board

Percentage-87.4%

Kolhapur, Maharashtra

05/2020 – 06/2021

PROJECTS

EMOTRACT-EMOTION RECOGNITION & ANALYSIS

08/2024-03/2025

- Built EmoTract to detect engagement, disengagement, and confusion in real-time during remote interviews and virtual classrooms using CNN and ResNet-50, achieving ~90% accuracy on a curated dataset of 12,000 facial video clips covering multiple age groups and ethnicities.
- Published research in <https://ieeexplore.ieee.org/document/11009820> detailing technical design, dataset analysis, and practical applications for online learning and interviews.
- Proposed commercial integration with virtual classroom platforms and remote interview tools to provide real-time engagement dashboards, enhancing student participation and interviewer feedback.
- Optimized data processing and model training pipelines using Python, TensorFlow, OpenCV, and Scikit-learn, enabling efficient evaluation of large datasets.

SMART EXPENSE TRACKER WITH PREDICTIVE INSIGHTS

05/2024-08/2024

- Developed a cross-platform Android app to track and categorize expenses, predicting future spending for 100+ test users using a Gradient Boosting Regressor, achieving an RMSE of 12.4% on a 6-month holdout dataset.
- Implemented AES-256 encryption for local storage and OAuth2 for cloud sync, ensuring data privacy and security.
- Integrated MongoDB for transactional data storage and React Native dashboards for visualization, improving user understanding of spending patterns by 40%.
- Acquired 100+ beta users, achieving a 75% weekly active user rate, demonstrating strong adoption and usability.

COLLABORATIVE TASK MANAGEMENT WEB APP

03/2023-05/2023

- Built a real-time collaborative task management web app for teams of 5–10 members to create, assign, and track 50+ tasks simultaneously, reducing update delays by 100%.
- Implemented with Node.js, Express, Socket.io, React, and MongoDB, deployed on AWS EC2, ensuring scalability and low-latency updates.
- Pilot tested with a small team, improving workflow efficiency and reducing project turnaround time by 25% over three months.
- Demo available at <https://github.com/sudarshan99/collab-task-app>

TECHNICAL SKILLS

Java, Python, C, C++, Android Development, React Native, Firebase, React.js, Node.js, Express, HTML, CSS, JavaScript, MongoDB, MySQL, SQLite, TensorFlow, CNN, ResNet-50, Machine Learning, OpenCV, Scikit-Learn, AI Model Training, Predictive Analysis, Git, GitHub, VS Code, Android Studio, Postman, Agile Methodology, REST APIs, Real-Time Updates, Socket.io, Cross-Platform App Development, Data Visualization, Full-Stack Development, Mobile App Development, PyTorch CI/CD Pipelines, Docker, Redux, Data Preprocessing, MLOps, System Architecture, Test-Driven Development (TDD), Requirements Engineering, Technical Documentation

ADDITIONAL

Languages: English (Fluent), French (Fluent), Hindi (Conversational), Marathi (Native)

Certifications & Training: Certified Ethical Hacker v13 | EC-Council | 09/2025