Atharva Karval

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Bachelor of Engineering in Computer Engineering
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EDUCATION

Bachelor of Technology in Computer Engineering *2022 – 2026*
Marathwada Mitra Mandal's College of Engineering, Pune
SGPA: 9.05

Honors in Data Science *2024 – 2026*
Savitribai Phule Pune University, Pune
Grade: Pass

EXPERIENCE

MatchMentor *April 2025*
A centralized platform for campus events and resources, developed during HackSprint 2025.

- Developed a web application to help students discover and register for campus events.
- Implemented event listings, user authentication, and real-time updates using TypeScript and React.
- Used MongoDB Cluster for backend storage and Firebase Authentication for user management.
- Project Repo: github.com/ironman2024/hacksprint

Bitcoin Analysis & Simulation Platform *June 2025*
An end-to-end Python toolkit for Bitcoin strategy analysis and blockchain mechanics demonstration.

- Built trading strategy modules (EMA, RSI, consensus) with backtesting support.
- Enabled real-time signals via live feeds for actionable decisions.
- Streamlit + Plotly dashboards with sentiment, volatility overlays, and resistance zones.
- Organized modular utilities, performance analysis, test suite.
- Project Repo: github.com/ironman2024/bitcoin

Nectar – AI-Powered Agricultural Assistant *September 2024*
AI-driven app for farmers offering disease detection and agricultural advice.

- Integrated MobileNet V2 for offline/online plant disease diagnosis.
- Built multilingual community forum for underserved regions.
- Tech: React Native, Firebase, Node.js, MySQL, Mobile BERT.
- Project Repo: https://github.com/ironman2024/Nectar

VisionAssist *Dec 2023 – Mar 2024*
Assistive tool for visually impaired using YOLO for real-time object detection.

- Provided real-time audio surroundings through voice commands.
- Enabled distance estimation and speech recognition for autonomy.
- Tech: Python, OpenCV, YOLO, pyttsx3.
- Project Repo: https://github.com/ironman2024/VisionAssist

EXPERIENCE

Project Intern – Production Planning Automation System *AkzoNobel, Thane*
Secured internship through professional networking and referrals *Jan 2025 – Feb 2025*

- Developed Python-based sequencing algorithms to optimize scheduling across product family, chemistry, and shade.
- Integrated real-time SAP data for dynamic resource allocation, reducing planning time by 50%.
- Collaborated with teams to align with industry standards and stakeholder needs.

Team Leader – Bug Detection and Fixing Project *Intel Unnati Industrial Training, MMCOE Pune*
Selected for industrial training program under Intel Corporation initiative *Feb 2025 – Apr 2025*

- Applied NLP and rule-based static analysis to detect both semantic and syntactic code anomalies.
- Explored ML-based repair suggestions by training models on buggy vs. fixed code samples.
- Oversaw version control, module integration, and collaborated with mentor for technical guidance.

Project Intern – Timer Software Development *Xtreme Engineering Equipments Pvt. Ltd., Pune*
Secured internship through professional networking and referrals *Mar 2025 – Apr 2025*

- Developed a .NET-based Timer Software application to automate and monitor industrial processes.
- Implemented features for time tracking, process scheduling, and real-time alerts.
- Collaborated with engineering team to gather requirements and tailor software.
- Conducted testing and debugging for production-grade deployment.

Data Science Intern *Conifyz, Nagpur*
Secured the internship through professional networking on LinkedIn *Dec 2024 – Jan 2025*

- Built predictive models using Linear Regression and Random Forest for restaurant ratings.
- Analyzed restaurant data in Python to identify trends in ratings, locations, and cuisines.
- Delivered geospatial insights through visualizations for strategic decision-making.

TECHNICAL SKILLS AND INTERESTS

Core Competencies: Full Stack Development, RESTful API Design, Microservices Architecture, Cloud-Native Applications, AI-Powered Systems, DevOps Practices, Containerization
Back-End Technologies: Python (Django, Flask), Node.js, Express.js, MongoDB Query Language (MQL)
Front-End Technologies: HTML5, CSS3, JavaScript (ES6+), React.js, Redux, Bootstrap, Tailwind CSS
Databases & Data Modeling: MongoDB, PostgreSQL, MySQL, Firebase, Redis; Schema Design Patterns, Aggregation Framework, Vector Search
Version Control: Git, GitHub, GitLab
Cloud Platforms: AWS, Google Cloud Platform (GCP), Microsoft Azure; MongoDB Atlas, Serverless Functions
Containerization and Orchestration: Docker, Kubernetes
CI/CD Tools: GitHub Actions, Jenkins, Travis CI
Testing Frameworks: PyTest, Jest, Mocha, Chai
Data Science & ML Tools: Jupyter Notebook, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, TensorFlow, Keras, PyTorch
GenAI & Search Technologies: Retrieval-Augmented Generation (RAG), Vector Embeddings, Semantic Search, LLM Integration, MongoDB Vector Search
Security & Authorization: Role-Based Access Control (RBAC), MongoDB Authentication & Authorization, Atlas Security Practices
Soft Skills: Problem-Solving, Analytical Thinking, Cross-Functional Collaboration, Agile Methodologies, Continuous Learning
Areas of Interest: Scalable Web Applications, AI/ML Integration in Web Services, GenAI RAG Pipelines, Cloud-Native Development, DevOps Automation

CERTIFICATIONS

Python for Data Science, AI & Development - IBM (Coursera) *2024*
Certificate Link

Crash Course on Python - Google (Coursera) *2024*
Certificate Link

Introduction to Android Mobile Application Development - Meta (Coursera) *2024*
Certificate Link

Capstone:Retrieving, Processing, Visualizing Data with Python - University of Michigan (Coursera) *2024*
Certificate Link

Using Python to Access Web Data - University of Michigan (Coursera) *2024*
Certificate Link

Python Data Structures - University of Michigan (Coursera) *2024*
Certificate Link

Programming for Everybody (Getting Started with Python) - University of Michigan (Coursera) *2024*
Certificate Link

Microservices with Node JS and React (Udemy) *2025*
Certificate Link

AWS Academy Graduate - AWS Academy Cloud Foundations (Credly) *2025*
Badge Link

Building GenAI Applications with MongoDB – MongoDB University *2025*
Badge Link

Building RAG Apps Using MongoDB – MongoDB University *2025*
Badge Link

Building AI-Powered Search with MongoDB Vector Search – MongoDB University *2025*
Badge Link

CRUD Operations in MongoDB – MongoDB University *2025*
Badge Link

MongoDB Query Optimization Techniques – MongoDB University *2025*
Badge Link

MongoDB Schema Design Optimization Skill Badge – MongoDB University *2025*
Badge Link

ACHIEVEMENTS

Winner – Sponsor's Choice Award, HackSprint 2025 *April 2025*
Developed "MatchMentor," a real-time mentor matchmaking platform using WebSockets and MongoDB.

2nd Place – CodeBid Hackathon, Cummins College of Engineering *April 2025*
Built a responsive web replication app under time constraints; recognized for speed, UI accuracy, and code quality.

Internal Round Winner – Smart India Hackathon 2024 *December 2024*
Designed "Nectar," an AI-powered agricultural assistant app for farmers; integrated disease detection, chatbots, and multilingual forums.

Merit Rank – Synapse 1.0 ML Hackathon (AICVS & GDSC Cummins) *March 2024*
Developed "QuickEats," a seamless ML-driven food-ordering platform; secured Merit Rank among top teams. Hackathon hosted at MKSSS's Cummins College of Engineering For Women, Pune.

All India Rank 1886 – Naukri Campus Aptitude Test 2025 *May 2025*
Achieved AIR 1886 out of 5+ lakh participants nationwide in a competitive assessment of aptitude, logic, and reasoning. Recognized by leading recruiters including Cognizant and Mu Sigma Inc.