Pushpak Vijay Katkhede

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EDUCATION

Master of Science in Computer Science   GPA - 3.75/4.0
Oregon State University, Corvallis, OR   Dec 2024

Bachelor of Engineering - Computer Engineering   GPA - 8.1/10
Savitribai Phule Pune University, Pune   June 2019

PROFESSIONAL EXPERIENCE

Oregon State University   **Corvallis, OR**
Graduate Teaching Assistant   Jan 2023–June 2024

- Mentored 126 students to analyze, test, fix bugs and contribute to OSS licensed software's.
- Trained students in mastering GitHub, delivering comprehensive training on version control, collaborative coding, workflows and solving merge conflicts.
- Assisted students to build full-stack MERN applications, showcasing ability to flawlessly integrate and leverage various technologies.

IBM   **Banglore, India**
DevOps Application Developer   Oct 2019–July 2022

- Built Chat Summarization application using cloud-based NLP models to visualize data which moderated read time by 75%.
- Designed virtual dispatchers which improved system availability by 23% assuring SLA adherence saving $75,000 penalty monthly.
- Spearheaded a team of 7 engineers in integrating 4 applications for metrics projection and instrumenting dashboards.
- Performed case studies of application architecture of 20+ clients, regulated POCs by documenting Solutioning presentations, Deployment plans diagrams, Evaluations Reports, owning Risk Mitigation, and presiding techno-functional communications.
- Implemented "DevOps Commander," interpreting chat messages and executing seamless operations on Kubernetes clusters and Docker containers through chat commands on Slack.
- Programmed "IT-Control-Tower," bundling orchestration scripts for deployment of tools, configuration, and integrations at a single click providing seamless environment setup triggering in less than 3 seconds by leveraging Infrastructure as Code (IaC).

TechAmplifiers   **Pune, India**
Data Science Intern   July 2019–Oct 2019

- Implemented Python scripts to load data, execute data preprocessing, and conduct accuracy evaluation for learned models.
- Conducted data interpretation to create visualizations using Python libraries Seaborn and Matplotlib, supporting the identification of trends in data.
- Identified trends and patterns through data analytics, resulting in an intuitive yet productive solution to business issues.

ACADEMIC PROJECTS

Live Assistance and Tracking System (Python, Flask, SVC, MQTT, MySQL)   [Code](#)

- Created a multi-tier solution establishing unipolar GPS-based contact between victims requesting help and the closest available police resource within 45 seconds of request, with less than 1% error rate, and received a 51,000 INR prize from Pune Police.
- Devised a special algorithm reducing human efforts in contacting the nearest available police by 85%, also tackling situational misuse due to human intervention, increasing the effectiveness of police by 60-65%.
- Suggested an optimized and efficient Police Force Deployment Model employing classification techniques based on the proneness of crime in areas, analyzing trends in the recorded crime dataset, cutting the time to reach the site by less than half.

Ashwamedh'19 (HTML, CSS, JavaScript, Bootstrap, jQuery)   Code
- Developed and deployed a responsive website for college events, incorporating JavaScript and jQuery for enhanced interactivity.
- Achieved over 10,000+ monthly hits, marking a significant increase in website traffic, and improved event registration by 1.5 times compared to the previous year.
- Successfully integrated a third-party ticketing system, an impressive carousel gallery, and streamlined inquiry forms, contributing to a smooth and interactive user experience.

Bandit Joins (C, PostgreSQL)
- Assisted Dr. Arash Temerchy in exploring strategies like hashing, index scanning, and batch processing to expedite the execution speed of joins in the PostgreSQL environment.
- Modified and executed PostgreSQL queries to load large-scale datasets for comprehensive join operations and established techniques that reduced execution speed by an average of 30%.

CrackStation (Python, Docker, REST API)   Code
- Created a specialized library, "CrackStation," focused on decrypting passwords encrypted using SHA-256 and SHA-512 algorithms.
- Defined a robust public API via REST and documented it using Swagger to allow users to access library functionalities.

PUBLICATIONS

Katkhede, P. V., Todmal, V., Pandey, D., Saini, A., & Patil, B. A. (2019). Live Assistance And Tracking System (LATS) using Cloud and IoT, International Journal of Computer Sciences and Engineering 7(1):749-751 DOI:10.26438/ijcse/v7i1.749751   Publication Link.

TECHNICAL SKILLS

- **Languages:** Python, C, C++, JavaScript
- **Databases:** MySQL, PostgreSQL
- **Frameworks:** Flask, Django, React, SQLAlchemy
- **Technology:** Kubernetes, Docker, Jenkins
- **Tools:** Git, Swagger, Jira, ServiceNow, Postman, RedHat Openshift, REST API
- **Domain:** Cloud Services, Machine Learning, Agile Development, Microservices

ACHIEVEMENTS

- **Certifications:** Python PCAP (31-03), IBM Data Science Professional, AZ-900 Azure Fundamentals, AWS Cloud Practitioner
- **Associations:** Founder and President of technical club "Código-e-Madrid"; General Students Secretary, AISSMS COE, Pune; Member of IEI Chapter, India; National Service Scheme – SPPU; Member of AI-GSA and EECS-GSA at OSU
- **Awards:** Winner of Sparks Hackathon, SIT Lonavala; Winner of Paper Presentation, ET'19, AISSMSCOE PUNE; "Super-Learner 2020" by IBM.
- **Extra-Curricular:** Played in 45+ State Level Inter-Collegiate Cricket Championships; Represented in Divison Level Badminton Tournaments.