Tirdesh Pettugani

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EDUCATION

Northeastern University, Boston, MA — Expected 05/2025
Candidate for a Master of Science in Information Systems — GPA: 3.8/4
Related Courses: Web Design and User Experience, Program Structures and Algorithms, OOD and AED

TECHNICAL SKILLS

Languages	Python, Java, JavaScript, TypeScript, C++
Databases	MongoDB, MySQL, Oracle DB, SQL Server, Hive, HBase
Web Technologies	React, Next.js, Node.js (Express.js), Angular, Flask, HTML, CSS
Libraries	TensorFlow, Keras, NLP, NumPy, Requests, OpenCV, NLTK, Pandas, Matplotlib, Scikit-learn
Cloud Platforms	Azure, AWS, GCP
Tools	Version Control (Git, Azure DevOps), RPA (Selenium, UiPath), Office Suite (MS Office, G Suite)

WORK EXPERIENCE

Commvault Systems, Hyderabad, India | **4+ years**

Software Development Engineer — 01/2021 – 08/2023
- Collaborated on 7+ revenue-generating projects, earning spot bonuses for UI/UX enhancements and recognition for contributions.
- Led migration of Angular applications to React, optimizing performance, and significantly enhancing user experience across projects involving technologies like HDFS, Spark, Impala, Kudu.
- Developed a Selenium-Python automation framework for GitHub and Azure DevOps repositories, boosting testing efficiency by 85% and reducing response time by 50%.
- Implemented an advanced anomaly detection system using machine learning algorithms (e.g., Isolation Forest, DBSCAN) to identify unusual patterns in system logs and user behavior, resulting in a 40% improvement in early detection of potential security threats and performance issues.
- Conducted regular code reviews to enhance code quality, analyzed and resolved over 200 customer escalations, led three projects from design to deployment, and mentored 5 interns in Python.

Associate Engineer — 07/ 2020 – 01/2021
- Created a prize-winning Chrome extension using Node.js and web hooks for enhanced web navigation during the Create 2020 Hackathon.
- Managed various Hadoop distributions and MongoDB setups, conducted bare metal recovery across UNIX systems including Rocky Linux, RedHat, CentOS, Ubuntu, and more.
- Designed and implemented new regression-focused automation test cases, introduced Agile methodologies reducing time-to-market by 25%, and maintained automation scripts that cut manual testing by 30%.

Intern — 01/2020 – 07/2020
- Automated and validated MongoDB functionality using Python and Selenium and maintained the test automation framework for the MongoDB backup agent while participating in comprehensive testing.
- Performed exploratory data analysis on system logs to identify performance bottlenecks and implemented visualizations to communicate findings effectively.
- Streamlined features using Python by integrating backend APIs with the requests library for validation and refactoring code for efficiency.

Bennett University, India | **4 Months**

Teaching Assistant, Course: Introduction to Computational Thinking and Programming using Python — 08/2018 – 11/2018
- Led hands-on lab sessions and facilitated advanced Q&A discussions, elevating student engagement and comprehension through interactive coding exercises and real-world problem-solving scenarios under Prof. Vipul Mishra's guidance.
- Implemented targeted mentoring strategies and developed bite-sized Python resources, including custom code snippets, enhancing students' programming proficiency, problem-solving skills, and overall learning outcomes across various difficulty levels.

PROJECTS

MagicLetter, Cohere | **https://github.com/tirdesh/magicletter** | **Vite React, Firebase, Shadcn-ui, AI Integration** — 04/2024 – 06/2024
- Created a scalable and centralized cover letter generation application utilizing Firebase for data storage, integrated with AI providers such as Cohere, Open AI, and Claude for content summarization, extraction, and generation capabilities.
- Incorporated features such as real-time preview, multiple templates, and easy customization to streamline the cover letter creation process.

Find A Roomie, Northeastern University | **https://github.com/tirdesh/FindARoomie** | **MERN stack** — 11/2023 – 12/2024
- Tailored a web application revolutionizes the accommodation search process for global students. By integrating messaging functionality, it facilitates real-time communication, fostering seamless interaction and collaboration.
- Enriched user experience by actively engaging them through integrated blog features, offering valuable insights, tips, and community updates related to student accommodation.

Indoor Navigating Bot, Bennett University | **Python, Artificial Intelligence** — 04/2019 – 07/2019
- Utilizing the A* pathfinding algorithm, the bot calculates the shortest routes from source to destination, optimizing navigation efficiency.
- Advanced obstacle avoidance techniques, integrated through sensors or computer vision, significantly reduce collisions by up to 70%, ensuring safe navigation and enhancing user confidence in the system's reliability.

Movie Recommendation System, Bennett University | **Python, Machine Learning** — 06/2017 – 08/2017
- Employed collaborative filtering and content-based recommendations to personalize movie suggestions, enhancing user satisfaction.
- Developed algorithms to process large datasets of user ratings and movie information for accurate suggestions.