

Tirdesh Pettugani

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EDUCATION

Northeastern University, Boston, MA

December 2025

Master of Science in Information Systems

GPA: 3.7/4

Related Courses: Cloud Computing, Adv. Big Data, Web Design and User Experience, Program Structures and Algorithms

TECHNICAL SKILLS

Languages & Frameworks Python, Java, JavaScript, TypeScript, C++, React, Node.js (Express.js), Angular, Next.js, Flask
Databases & Big Data MongoDB, MySQL, Postgres, SQL Server, Hive, HBase, HDFS
AI/ML & Data Science TensorFlow, Keras, Scikit-learn, NumPy, Pandas, OpenCV, NLTK, LangChain, Llama4, OpenAI
Cloud & DevOps Docker, Kubernetes, Azure, AWS, GCP, OCI, Linux
Web & APIs HTML, CSS, REST API, GraphQL, TCP/IP, OSI Model
Tools Version Control (Git, Azure DevOps), RPA (Selenium, UiPath), Office Suite (MS Office, G Suite)

WORK EXPERIENCE

Wave Life Sciences, Lexington, USA

Microsoft 365 Copilot Engineer

04/2026 – Current

- Engineered and deployed conversational AI solutions using Microsoft Copilot Studio, including an NDA agent and a Freshservice-integrated IT ticketing bot, leading end-to-end testing, debugging, and feedback cycles to streamline enterprise service workflows
- Directed the full AI agent lifecycle and automation strategy, from debugging complex deployment pipelines to leading feasibility studies on Copilot-driven workflows, ultimately defining technical prerequisites and presenting scalable architectures to senior leadership

Northeastern University, Boston, USA

Research Assistant

08/2025 – 12/2025

- Designed and deployed dashlab.io as DASH Lab's public-facing platform, showcasing research innovations that generated partnership discussions and attracted inquiries from 5+ potential investors and industry stakeholders
- Enriched 70K+ alumni records by engineering automated web scraping pipelines and third-party API integrations, transforming disparate data sources into structured datasets for targeted outreach
- Launched AI-driven educational tools, including EssayBot (streamlined essay grading using Gemma models deployed on A6000 infrastructure) and PresBot (real-time presentation coaching powered by voice cloning ML models), transforming manual processes into scalable, personalized feedback systems

Wave Life Sciences, Lexington, USA

IT Intern

01/2025 – 06/2025

- Engineered hybrid cloud and automation solutions, leveraging Power Automate and Python to bridge on-premises research data with AWS and Azure environments, while managing Microsoft 365 infrastructure and user identity lifecycles.
- Streamlined IT operations within a regulated clinical laboratory by developing Power BI dashboards for ServiceNow analytics to improve device hygiene, and collaborating with Cybersecurity to enforce endpoint hardening and infrastructure reliability

Commvault Systems, Hyderabad, India | 4+ years

Software Development Engineer

01/2021 – 08/2023

- Collaborated on 7+ revenue-generating projects, earning spot bonuses for enhancements and recognition for contributions, while maintaining automation scripts that cut manual testing by 30%
- Built responsive and reusable React components from Figma designs, collaborating with design and backend teams to ensure seamless UI/UX, efficient data integration via GraphQL and REST APIs
- Engineered a Selenium-Python automation framework for GitHub and Azure DevOps, boosting testing efficiency by 85% and reducing response time by 50%
- 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

01/2020 – 01/2021

- Won internal hackathon (Create 2020) by developing a Chrome extension using Node.js and webhooks that enhanced web navigation workflows for internal tools
- Managed Hadoop distributions and MongoDB deployments, conducting bare metal recovery across UNIX systems (Rocky Linux, RedHat, CentOS, Ubuntu) to ensure system reliability and data integrity
Supported enterprise backup infrastructure using Commvault—including disaster recovery (DR) workflows, automated provisioning, backup/recovery, and resource optimization for databases (SQL Server, Postgres, MongoDB)

PROJECTS

LearnX, Northeastern University | <https://youtu.be/lk7-5Qedr1o> | iOS, SwiftUI, Firebase

04/2024 – 06/2024

- Developed an iOS learning platform for mastering Data Structures and Algorithms with structured modules, interactive quizzes, real-time progress tracking, and community-driven discussion forums for mobile-first learning

MagicLetter, Personal Project | <https://magicletter.vercel.app> | Vite React, Firebase, Shadcn-ui, Tailwind CSS

04/2024 – 06/2024

- Built a scalable cover letter generation application using Firebase and AI providers (Cohere, OpenAI, Claude) with real-time preview, multiple templates, and easy customization for streamlined job application workflows