Shyam Patadia

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EDUCATION

Worcester Polytechnic Institute **Aug 2025 – May 2027**
Master of Science in Data Science - GPA: 4.00

Narsee Monjee Institute of Management Studies **July 2017 – May 2021**
Bachelor's of Science in Applied Statistics and Analytics

TECHNICAL SKILLS

Programming & HPC: Python, .NET/C#, Java, Julia, SQL, Bash/PowerShell, Slurm, CUDA, C++
Automation Testing: PyTest, Selenium, Playwright, Appium, SpecFlow, Cucumber, Postman
Backend & Databases: FastAPI, Flask, Django, MySQL, PostgreSQL, MongoDB, SQL Server, DynamoDB, Mem0
Cloud & DevOps: AWS (EC2, S3, Lambda), Azure, Docker, Kubernetes, Terraform, CI/CD, Redis
Generative AI & Machine Learning: PySpark, Pandas, Scikit-learn, Tableau, Power BI, LLMs, NLP, RAG, vLLM, Langchain, CrewAI, Langgraph, DSPy ollama, RAG, Statistical Modeling
Project Management: Agile, Scrum, Jira, SDLC, 21 CFR Part 11 Compliance, UAT, SOP drafting.

EXPERIENCE

xLM Continuous Validation **Jul 2021 – Jul 2025**
Lead Software Engineer - AI **Nov 2023 – Jul 2025**

- Led development of Project Manava, an AI-driven test automation platform, from research through production deployment—architecting multi-agent systems with LLMs, VLMs, CrewAI, and LangGraph that automated the complete validation lifecycle and reduced manual effort by 90%
- Built full-stack features end-to-end including customer-facing interfaces, backend APIs with FastAPI, and database systems (PostgreSQL, MongoDB) serving pharmaceutical companies ensuring FDA compliance
- Designed GPU-accelerated inference services with PyTorch and vLLM deployed on AWS/Azure; optimized for speed and scale with low-latency API responses and implemented statistical evaluation loops for model performance
- Collaborated cross-functionally with product managers, designers, QA teams, and regulatory stakeholders to create cutting-edge AI products—presenting technical findings to executives and incorporating user feedback into product iterations
- Implemented CI/CD pipelines with Azure DevOps and Docker, orchestrated Kubernetes infrastructure, and drafted SOPs standardizing version control and release processes

SDET II **Sep 2022 – Oct 2023**

- Designed end-to-end automation frameworks with Selenium, Playwright, and SpecFlow for enterprise applications, reducing deployment cycles by 40% through continuous testing and integration.
- Led development of xLMCore NuGet package (v0.0.1 to v2.0.15), the core automation engine used across products, collaborating with engineers to ensure reliability and maintainability.
- Built Jira and Azure DevOps integration improving project visibility and workflow efficiency across engineering teams.
- Designed end-to-end automation frameworks with Selenium, Playwright, and SpecFlow for enterprise applications, reducing deployment cycles by 40% through continuous testing and integration

SDET I **Jul 2021 – Aug 2022**

- Automated validation testing for enterprise applications (Veeva, Sage, Rhythm) using Selenium, Appium, and API testing with Postman, ensuring compliance and system reliability
- Established automated reporting pipeline with Power BI dashboards providing real-time test execution visibility enabling data-driven decisions

PROJECTS

CATS Anomaly Detection System | *Python, XGBoost, Deep Learning, Flask* **Oct 2025 – Dec 2025**

- Built anomaly detection system for industrial sensor data using machine learning (XGBoost, LSTM, Autoencoders) and statistical methods, deployed via Flask API for real-time monitoring
- Optimized feature engineering pipeline and implemented ensemble methods improving detection accuracy across multivariate time-series data

Sentiment-Based Trading System | *Python, FastAPI, BERT, Selenium* **Feb 2021 – Mar 2021**

- AI system combining news sentiment analysis (BERT) with technical indicators for intraday trading signals; automated news scraping and backtesting achieving 2.6% daily profit with 1:2.5 risk-reward ratio

CERTIFICATES

Azure DevOps - AZ900 Jan 2024
Certified Scrum Developer Aug 2022
Software Development Processes and Methodologies July 2021