

BHUMIR RAVAL

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SUMMARY

Detail-oriented IT Specialist and Researcher with dual Master's degrees, specializing in AI automation workflows, server infrastructure management, and legacy system modernization. Proven track record of engineering custom LLM solutions, optimizing OpenInsight databases, and maintaining high-availability enterprise systems.

EDUCATION

MS in Computer Information Science (Software Engineering) October 2026
Harrisburg University | Harrisburg, PA

MS in Information Systems May 2024
Hofstra University | Hempstead, NY

B.Tech in Electronics and Communication May 2021
Indus University | Ahmedabad, Gujarat

TECHNICAL SKILLS

Automation & AI: n8n, Custom LLM Fine-tuning, AI Agent Workflows, Power Automate, RAG Pipelines.
Development: OpenInsight (Procedure writing & DB Admin), Python, SQL, SharePoint, ServiceNow.
Infrastructure: Windows Server Administration, Linux, Active Directory, Azure, Device Imaging.
Tools: Power BI, Docker, WordPress, Microsoft 365 Admin.

WORK EXPERIENCE

IT Specialist March 2025 - Present
Galil Brands | Hauppauge, New York

- Engineered n8n and AI automation workflows to reduce manual data entry processes by 40%.
- Developed custom OpenInsight database procedures to optimize inventory logic and system integrity.
- Managed Windows/Linux server infrastructure, including security hardening, patching, and resource allocation.
- Administered JIRA and Microsoft 365 environments, resolving escalated issues and enforcing governance.
- Integrated Power BI with SQL databases to architect robust data models for real-time reporting.

IT Analyst October 2023 - May 2024
Hofstra University | Hempstead, New York

- Supported over 150 faculty members with real-time tech troubleshooting and academic software configuration
- Utilized Python and SQL to create scripts that enhanced system monitoring and troubleshooting processes
- Resolved outages and minimized disruption through fast incident response and network restoration using Cisco tools
- Improved system reliability and end-user experience by addressing performance bottlenecks in educational platforms
- Assisted in reviewing and updating documentation for IT processes, contributing to departmental SOP improvements

IT Support Technician February 2023 - September 2023
Hofstra University | Hempstead, New York

- Managed onboarding/offboarding of university IT users and configured laptops, printers, and software environments
- Triaged and resolved incidents in ServiceNow, escalating critical issues and maintaining SLA response times
- Used Microsoft Active Directory for account management, permissions control, and user authentication
- Boosted digital adoption by integrating new Microsoft 365 tools into faculty workflows and online learning systems
- Documented recurring IT issues to reduce repeat service requests and accelerate resolution efficiency

Medisonic Equipments Pvt. Ltd. | Gandhinagar, India

- Led over 25 product testing cycles, validating medical device performance and software reliability
- Optimized data flows and reduced system latency by analyzing test results using Hadoop and MapReduce
- Coordinated with the R&D team to integrate user feedback and enhance product usability and compliance
- Participated in system development and debugging, improving software scalability for healthcare clients
- Ensured product quality and regulatory compliance through detailed reporting and test result analysis

Research Paper and Project

Research Paper: Quantifying Semantic Decay in Autonomous Multi-Agent Chains (Ongoing)

- Developing a framework to quantify information loss in sequential AI agent communications using **n8n** for orchestration and **Python** for statistical analysis.
- Designing metrics to measure "semantic drift" across multiple LLM hops, aiming to improve reliability in long-chain automated workflows.

Research Paper: Exploring Gender Bias in AI-Generated Content

- Investigated algorithmic bias in LLMs (ChatGPT, Gemini) by building **Python scripts** to analyze and score gender disparities in generated advertising text.
- Identified significant statistical variances in gender-specific language, underscoring the need for stricter ethical guidelines in commercial AI deployment.

Capstone Project: Network Enhancement for UK and USA Offices

- Designed a secure, multi-site network infrastructure using **Cisco simulation tools**, implementing optimized routing protocols, VLAN segmentation, and firewall rules.
- Engineered failover strategies to reduce latency and enhance bandwidth efficiency, delivering a scalable architecture aligned with enterprise security best practices