Sadhana Jamkatel

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EDUCATION

North Central College, Naperville, IL **GPA 3.85/4** ***Expected: May 2027***

Major: Bachelor of Science in Computer Science, **Minor:** Economics**, Concentration:** Ethical Leadership

Relevant Coursework: Python, Data Structures, Discrete Structures, Computer Organization and Design, Software Development, Website Development, Data Mining, Calculus I & II, Database System, Algorithm & Design, Computer Network & Security

TECHNICAL SKILLS

Programming Languages: Python, C/C++, JavaScript, TypeScript, Java

Web Development: React.js, Next.js, Node.js, Flask, HTML, CSS, Bootstrap

Cloud & Tools: AWS (S3, EC2, Lambda, CloudFront, CloudWatch, IAM, CDK), Docker, Linux/Unix, GitHub Actions, GitLab, Git, OCLIF, Bash scripting

Databases: MongoDB, PostgreSQL, MySQL, Google Cloud Firestore

APIs & Frameworks: RESTful APIs, Flask, Microservices architecture

ML/AI: scikit-learn, pandas, NumPy, LangChain, Gemini, HuggingFace, CUDA

Other: Agile, CI/CD, Testing (pytest, Jest), Automation, OOP, Figma, Tableau, Cybersecurity, JSON/YAML

WORK EXPERIENCE

DevOps Engineer Intern ***June 2025-Aug 2025***

Aeropay - Chicago, IL

- **Reduced documentation search time from 30 minutes to 30 seconds** by building a full internal documentation site from scratch using Docusaurus (with MDX and charts), serving 30+ engineers daily with integrated custom search and chart components, hosted on GitHub Pages with automated CI/CD via GitHub Actions
- **Set up automated pipelines and AWS hosting (S3 + CloudFront)** with JumpCloud SSO access controls, making the site secure and reliable for DevOps and engineering teams, while incorporating AWS CloudWatch telemetry to monitor system performance
- **Automated the release process** using OCLIF's markdown generator and GitHub Actions to publish updated CLI documentation to a live site with every release, eliminating manual updates and ensuring documentation accuracy
- **Supported engineering operations** by debugging CI/CD failures, resolving AWS configuration issues, and troubleshooting infrastructure problems to improve team development velocity

High-Performance Computing (HPC) Bootcamp Participant ***August 2025***

Argonne National Laboratory - IL

- Built interactive chatbot application for scientific Q&A using Python, LangChain, and Gemini API, implementing both RAG and non-RAG architectures to compare accuracy and latency trade-offs
- Gained hands-on exposure to Argonne's supercomputing ecosystem (incl. Aurora) and HPC workflows used in scientific computing**.**
- Completed workshops in data visualization and machine learning for science; practiced turning datasets into clear, usable insights.

PROJECTS

Predictive Maintenance ML System for Fleet Engine Monitoring ***Sep 2025***

- Created predictive maintenance system analyzing 21 sensor readings from NASA engine data to detect at-risk engines, enabling maintenance teams to address failures proactively and reduce downtime by 95%
- Designed React dashboard with alert system and reporting features allowing operators to monitor 100+ engines, assess failure risk, and notify maintenance teams of critical issues in real-times
- Trained Random Forest classifier (96% accuracy, 4.28% false alarms) to provide actionable risk assessments, helping teams prioritize maintenance and achieve $750K+ projected annual cost savings

Twitter Clone | Full Stack Development | Web Application Development ***May 2024- Dec 2024***

- Developed a full-stack Twitter clone designed for good user experience that supports user authentication, tweet posting, and social interactions like following/unfollowing, using technologies such as React, Vite, Node.js, Express.js, MongoDB, and Cloudinary.
- Designed and implemented RESTful APIs with JWT, bcrypt, and custom middleware, applying software design best practices for scalability and security, and tested using relational database concepts to ensure reliable data handling.

ON CAMPUS INVOLVEMENT

Resident Assistant | ***North Central College*** ***May 2024 – Present***

- Organized 15+ community-building programs per semester for 100+ residents, achieving 80% participation rate through targeted outreach and event planning
- Provided mentorship and conflict resolution support to first-year students navigating college transition

President | Computer Science Club | ***North Central College*** ***May 2023 – Present***

- Grew club from 15 to 60+ active members by building partnerships with tech companies and organizing 10+ workshops with software engineers, hackathons, coding challenges, and collaborative projects covering algorithms, web development, and technical interview preparation
- Led team of 25 officers in coordinating hands-on technical events and peer mentorship programs, fostering inclusive learning environment that increased women's participation in club activities by 40%

PROFESSIONAL AFFILIATIONS

Color Stack, RTC, SHPE, NSBE, AnitaB.org, Girls Who Code, ACM, Women in Technology, Codepath, Code2040