

Maharsh Jani

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EDUCATION

University of Illinois Urbana-Champaign

Expected May 2028

Bachelor's in Computer Science & Learning Sciences

GPA: 4.0 / 4.0

- **Honors:** Chancellor's Scholar (Top 1%), James Scholar, Dean's List (x3), We CU Scholar
- **Involvement:** CS Student Ambassadors/Research Scholar, Peer Mentoring Center, Teach for America Ignite
- **Coursework:** Data Structures & Algorithms, Computer Architecture, Linear Algebra, Probability & Statistics

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, C/C++, SQL, Bash, $\text{\LaTeX}$

Web & Real-Time: React.js, Node.js, Django, FastAPI, GraphQL, WebSockets, Yjs/CRDT, REST APIs

Data & Intelligence: PostgreSQL, MongoDB, Neo4j, Redis, RabbitMQ, pandas, NumPy, statsmodels

Production: Docker, Kubernetes, AWS EC2, GitHub Actions CI/CD, Git, Linux

EXPERIENCE

National Science Foundation AI INVITE Institute

Champaign, IL

Software Engineer

Dec 2025 – Present

- Built a real-time learning analytics tool that helps AI tutors catch struggling students mid-lesson instead of after class, reverse-engineering a virtual robotics environment to capture 9 live signals from student code and robot movement at sub-1-second latency.
- Shipped a live session dashboard, demoed to NSF site visit reviewers, that rebuilds a student's full coding workspace from raw activity and turns 41K+ events into the structured context AI tutors need to personalize help.
- Hardened the platform for production by cutting database storage 84% through a normalized 5-table redesign, recovering 24 hours of silently dropped logs per query with a datetime fix, and adding a health endpoint that auto-degrades to 503 when dependencies fail.
- Launched an agent intervention platform that lets a 10+ person research team deploy new AI tutor behaviors through a config change instead of a code deploy, evaluating behavioral rules against live data on a 5-second cycle at a scale of 200K+ events across concurrent classrooms.

Illinois Women in Computer Science DevAda

Champaign, IL

Lead Software Engineer

Jan 2026 – Present

- Led 4 developers across 10 weekly sprints from zero machine learning experience to a deployed product, owning the technical direction and keeping the team shipping on a fixed deadline.
- Built FireWatch, a wildfire forecasting tool that predicts fire severity 52 weeks out to help agencies pre-position resources, merging 3 federal datasets across 365 days and 11K+ fire observations into a single live-updating pipeline.
- Engineered the stack end to end, transforming raw air quality, satellite, and weather data into 8 model-ready features, training a time series forecasting model, and shipping an interactive Streamlit and PyDeck map with adjustable wind conditions.

PROJECTS

Real-Time Collaborative Editor | *React.js, GraphQL, PostgreSQL, Redis, Docker, AWS*

- Built a Google Docs-style editor where multiple people write in the same document at once and see each other's changes in under a second, shipping 88 commits across 10 weeks with a team of 4.
- Owned the full frontend-backend integration layer, connecting React to a GraphQL API and PostgreSQL to deliver live multi-user sync, version history with rollback, and inline commenting through Yjs CRDT WebSockets.
- Containerized 3 services and deployed to AWS EC2 and Kubernetes via 2 GitHub Actions CI/CD pipelines that auto-build, tag by commit SHA, push to Docker Hub, and deploy with zero manual steps on every merge.

LEADERSHIP

University of Illinois Student Alumni Ambassadors

Champaign, IL

Vice President of Alumni Relations

Mar 2026 – Present

- Organize events hosting 250+ guests and coordinate 10+ volunteers across 7 football game days for a 90-member organization, and built a 650-person alumni database with outreach templates.

Management Leadership for Tomorrow (MLT)

Remote

Career Prep Fellow

Jan 2026 – Present

- Selected for a competitive 18-month program developing business and technical acumen through structured coaching and engagement with partners including LinkedIn, Bloomberg, and Deloitte.