Akshansh Kumar

Software Engineer

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Summary

Software Engineer with over **5+ years** of expertise building full-stack applications with Python and React. At D. E. Shaw, I develop and maintain mission-critical tools for the firm's **risk team**, focusing on enhancing reliability, operational efficiency and supporing quants. Passionate about solving complex problems in high-stakes environments.

Technical Skills

- **Languages & Frameworks (Backend):** Python, FastAPI
- **Languages & Frameworks (Frontend):** ReactJS
- **Data & Visualization:** Pandas, Plotly, Streamlit
- **Databases:** MongoDB, FAISS
- **AI Tools and Technologies:** RAG, Claude SDK

Work Experience

Senior Member, Tech

D. E. Shaw India Pvt. Ltd. | Gurugram, India | 08/2020 - Present

- Created knowlegde sharing chat assistant for Risk Team's code and doecumentation, Using RAG + Claude SDK, **Reduced new member onboarding time by 30%**
- Contributed to development of a data validation framework for the Firmwide performance attribution numbers, **reduced Quant debugging time by 50%** with automated daily monitoring.
- Led the development of a Session Replay tool for a JavaScript framework, enabling proactive UI bug detection with video-like playback and debugging data.
- Built a fast CI/CD pipeline that selectively runs tests on modified files, significantly speeding up PR testing and improving overall development efficiency.

- Developed a performance tracking application to monitor task efficiency on our server grid, leading to **optimized CPU/memory usage and better resource allocation**.
- Automated end-to-end testing using Cypress, which **reduced manual testing efforts by 80%** and enhanced software quality.
- Created a workflow management application for Operations Engineers using Streamlit, boosting productivity by providing a centralized platform for managing tasks and visualizing daily metrics.

Intern

AT&T Communication Services | Noida, India | 05/2019 - 07/2019

Projects and Open Source Contributions

Session Replay Tool (2024)

- Developed a tool that monitors production-critical applications and allows for replaying user sessions to diagnose issues.
- Eliminated the need for end-users to report bugs manually and significantly reduced developer time in reproducing them.
- Provided developers with key insights through real-time console logs and network request status.

Operations Dashboard App (2021)

- Built a dashboard application to simplify operational tasks.
- Significantly reduced manual effort in ops, increased team productivity, and streamlined the code release process.

Custom Streamlit Components

- Created and contributed custom components to the open-source Streamlit ecosystem.
- All contributions were well-received and adopted by the community.

Education

Masters of Technology (M. Tech)

BITS Pilani | 10/2025 - Present

Masters of Computer Applications (MCA)

Amity University | 09/2021 - 10/2022

- CGPA: 8.55

Bachelor of Computer Applications (BCA)

Amity University | 07/2017 - 06/2020

- CGPA: 9.0
- Awarded with Bronze Medal for Academic Excellence.

Achievements

- Won First Prize in DE Shaw Firm-wide Hackathon (2024)
- Completed Google foobar challenge (2022)
- Won First Prize in DE Shaw QTE Hackathon (2021)
- Filed 5+ Patents (2020)
- Honored in Google Bug Hunter Hall of Fame (11/2019)