Akshay Kumar

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Education

University of Maryland, Baltimore County — Baltimore, MD
Master of Science in Computer Science — *Aug 2023 – May 2025*

Malla Reddy College of Engineering and Technology — Hyderabad, India
Bachelor of Technology in Computer Science and Engineering — *Jul 2017 – Jun 2021*

Technical Skills

Languages: C#, C/C++, Python, SQL, JavaScript, HTML/CSS, XAML
Frameworks: .NET Core, WPF, WinForms, MFC, Vue.js, ReactJS, SpecFlow, xUnit, NumPy, TensorFlow
Developer Tools: Git, SVN, Jira, Confluence, BitBucket, Microsoft Azure, Postman, Swagger

Experience

Graduate Teaching Assistant - CMSC441 Design and Analysis of Algorithms — Sep 2024 – Present
University of Maryland, Baltimore County — *Baltimore, MD*

- Mentoring 30+ computer science students in core algorithmic concepts, including data structures, sorting algorithms, and graph theory, fostering industry-relevant coding and problem-solving skills.

Software Developer — Sep 2021 – Jul 2023
Hexagon R&D India (formerly Hexagon Capability Center India) — *Hyderabad, India*

- Spearheaded localization of Hexagon MinePlan 3D™ for French and Chinese markets, translating 100+ UI elements to enable market expansion and generate $1M+ in annual revenue through new licenses.
- Migrated a 40 year-old C/C++ code-base to C# using WPF/WinForms (MVVM Pattern) by refactoring 1000+ lines of code, reducing technical debt by over 30%, and saving about 200 developer hours per quarter.
- Architected and implemented batch-configuration feature for MinePlan 3D™ Auto Cut Generation tool using C++, enabling multi-pit parameter setup in a single workflow, saving $350K+ and 150+ planning hours anually.
- Designed and launched a web-based gamified platform for the Learning & Development team using ReactJS, .NET Web API, and Azure SSO, driving a 100% increase in learning participation among 150+ employees.
- Developed a cloud-based solution for HxGN GeoLogic™ during an internal hackathon, offloading CPU-intensive tasks to Azure, reducing local resource usage by 90%, and improving model delivery by 50%.

Full Stack Developer Intern — Mar 2021 – Jul 2021
DeltaX — *Bengaluru, India*

- Modernized a legacy front-end architecture (jQuery) by migrating to a single-page application using Vue.js, achieving a 25% reduction in page load times and improved application performance.
- Optimized database interactions by transitioning performance-critical operations from ORM-based queries (Dapper) to stored procedures in SQL Server, achieving a 40% reduction in query execution time.

Reporting & Data Analyst Intern — May 2020 – Jul 2020
Deloitte USI — *Hyderabad, India*

- Developed a data-driven recommendation report suggesting optimal content placement on the company website, informed by traffic analytics and heat map studies, resulting in a 20% increase in user engagement.
- Conducted in-depth analyses of site navigation patterns and content effectiveness, proposing UX enhancements that cut bounce rate from 52% to 38%.

Projects

Cancer Diagnosis using Deep Neural Networks | Source Code — Apr 2024 – May 2024

- Developed and trained a Deep Neural Network using real-world hospital data consisting of 698 patient records and 9 health metrics, achieving 97% accuracy in distinguishing between cancerous and healthy cases.

Energy Optimization Using LSTM Neural Networks | Source Code — Nov 2023 – Dec 2023

- Designed and implemented a machine learning-based energy optimization system using LSTM neural networks. Achieved 89% accuracy in forecasting energy consumption while reducing prediction errors by 20%.