

Mir Khan

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Senior Software Engineer with four years of experience building and enhancing business applications, database solutions, back-end services, and AI-based tools in enterprise environments. Leverages extensive development experience and end-to-end, systems-oriented approach to solve complex problems, translate difficult requirements into reliable solutions, and improve scalability, performance, and maintainability over time. Known as an adaptable, approachable engineer who takes ownership of complex problems, learns new technologies quickly, and collaborates across teams to deliver reliable, scalable solutions.

Key Strengths:

- Software Engineering & Application Development
- Full-Stack Development & Systems Integration
- Back-End Development & Service Architecture
- API Integration & Development
- Development of AI- & LLM-Powered Solutions
- Web Application Development
- Database Development & Data Management
- Scalable Systems & Application Design
- Production Software Development & Delivery
- Technical Problem-Solving & Troubleshooting
- Data Analysis, Data Visualization, & Reporting
- Requirements Analysis with Cross-Functional Stakeholders
- Performance Optimization & System Reliability
- Continuous Improvement for Efficiency & Performance

WORK HISTORY

INCEDO INC., Raleigh, NC

Senior Software Engineer, 10/2024 to 08/2026 | Software Engineer, 08/2022 to 10/2024

In this full-stack engineering position, collaborated with in-house and client-side engineering teams to develop and implement internal applications and tools for network testing, monitoring, troubleshooting, data collection and analysis, and customer support. Engaged by Verizon to support software development across Fios and telecommunications infrastructure, with primary focus on LLM-based automation, Android application development, network outage alerting, and RAG architecture. Built primarily in Python and Java.

- Enhanced network outage alert systems serving millions of users by collecting and analyzing approximately 500K records across two large Oracle databases, identifying three critical pain points in the alerting infrastructure. Delivered findings to leadership, which prompted a dedicated team to take up the work and implement improvements to the customer-facing outage notification system.
- Automated three manual workflows by developing and integrating LLM-based tools, including wireless customer troubleshooting and training flows and a Fios troubleshooting flow designed to resolve issues autonomously and reduce inbound call volume to human support.
- Earned a reputation for going above and beyond for high-priority projects requiring additional time and effort, emerging issues requiring rapid intervention, and engagements with tight deadlines for delivery.
- Deepened expertise in Unix systems and methodologies, applying them to deploy instances with greater control over resources and environments and directly informing more scalable project planning and architecture decisions.
- Upon promotion to senior software engineer, took greater ownership of project planning, leading requirements gathering, raising scalability considerations, and driving team discussions on technical challenges and task assignments.

EMPIRE STATE DEVELOPMENT, New York, NY

Data Analyst (Internship), Contract Administration, 02/2018 to 08/2018

Consulted with department employees to streamline and automate existing workflows using Excel and Access.

- Developed VBA-powered macro-enabled spreadsheets to calculate loan feasibility for small businesses.
- Consolidated hundreds of thousands of loan applications into a master document used by the Empire State Development team to accelerate contract approval.

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PROJECT HIGHLIGHTS

Two LLM Agents for Network Support (2025 to 2026) – At Incedo, played an essential role in advancing Verizon’s LLM initiative, building an AI assistant to help technical agents quickly identify and resolve customer network issues. Developed the solution using a LangGraph multi-agent architecture—a head agent coordinating multiple specialized sub-agents with shared tool access—built in Python with LangChain, following industry best practices for enterprise LLM development.

Built and deployed a second LLM into the Fios network support line to autonomously diagnose and resolve customer issues without human intervention, reducing call volume by approximately 300K calls per month and saving millions of dollars monthly. Together with the first tool, established the foundation for a retrieval-augmented generation (RAG) architecture at Verizon—compiling internal documentation and veteran subject matter expertise into a proprietary knowledge base to ensure accurate, hallucination-resistant model outputs.

Automated Signal Tower Testing Application (2024) – Engaged by Verizon to create an Android application that allows field technicians to test the health of signal towers in the field. The solution captured hundreds of thousands of parameters from signal towers nationwide, analyzed the information, and presented data feeds and reports on network health. Field-tested the application at a Super Bowl event with about 65K attendees: Used the solution to capture network information and identify network issues from all devices in real time.

Application Calculator (2018) – Co-developed a macro-enabled Excel tool using VBA to automate calculations for project managers, including work scope availability, firm distribution, and certified work amounts for vendors based on regional business data. The calculator includes custom VBA macros that aid users in distributing project tasks across qualified local firms and minority business enterprises. The workbook ingests regional industry datasets (i.e., Census Bureau business patterns filtered by North American Industry Classification System (NAICS) codes and county levels) to translate raw demographic data into actionable project benchmarks.

Online Shopping Assistant (2026) – In this personal project, designed a [Python-based bot](#) that utilizes APIs from IsThereAnyDeal.com to fetch deals of watched products and send notifications to users via Discord direct message. Initially hosted the tool on a low-cost server for personal use and created a plan to host (on Railway) and scale to support up to a few hundred users at once.

Virtual Card Organization Solution (2026) – Built a [Python-based organization system and library](#) that allows users to view, sort, and organize Pokémon cards virtually, rather than using a physical binder. The GUI application uses public APIs and local caching to fetch card data and support a user search function.

TECHNICAL EXPERTISE

Languages & Frameworks – Python, Java, SQL, JavaScript, React.js, Bootstrap, HTML, CSS, Unix

Developer Tools – MS Visual Studio Code, Eclipse, DBeaver, Tableau, Postman

Databases – PostgreSQL, MS Access

AI & Automation – LangChain, LangGraph

Productivity – Microsoft Office (Excel, Word, PowerPoint, Outlook, Access)

Project Management & Collaboration – Agile / Scrum, Jira

Cloud – AWS Cloud (foundational experience)

CERTIFICATIONS

Oracle Certified Associate: Java SE 8 Programmer II – Oracle

Certificate in Java Programming and Software Engineering Fundamentals – Duke University via Coursera

Certified Full-Stack Developer – freeCodeCamp

EDUCATION

Bachelor of Business Administration (BBA) in Information Risk Management and Cybersecurity, Minor in Sociology

Baruch College, Zicklin School of Business, New York, NY