Imaduddin Sheikh

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EDUCATION

Illinois Institute of Technology — **August 2019 — May 2023**
Bachelor of Science in Computer Science — *Chicago, IL*

SKILLS

Programming Languages	Python, Java, SQL, C#, C++, R, Bash/Shell, HTML/CSS, JavaScript, VB.NET
Technologies	Git, .NET, WPF, Azure, AWS, GCP, JUnit, Snowflake, Qt

WORK EXPERIENCE

Software Engineer — **December 2024—Present**
MIFtek Corporation — *West Lafayette, IN*

• Led development and maintenance of real-time visualization pipelines, configuration systems, and fluidics control logic for flow cytometry instrumentation using Python and Qt (QtWidgets). Built modular startup/shutdown routines for fluidics subsystems and managed experiment metadata—such as subsystem presets, calibration profiles, and usage history—using PostgreSQL.

• Collaborated with firmware, hardware, and systems teams to resolve timing issues, signal mismatches, and subsystem state sync errors. Delivered 30+ feature enhancements and resolved 100+ bugs reported via GitHub and live testing.

• Designed multithreaded visualization services processing 2M+ datapoints every 250ms using LMDB, and implemented real-time waveform plotting to stream PyTorch/NumPy tensors at ~50ms intervals for oscilloscope-style analog and photon signal monitoring. Wrote Windows batch scripts to compile C++ modules, enabling Python access to machine-level interfaces.

• Engineered domain-specific axis types (linear, logarithmic, logicle) with scientific tick formatting and scaling for datasets up to 10^8 values. Built advanced visualizations including pseudocolor (2D histograms) and spectral ribbon plots with real-time axis transformations and interactive LUTs. Prototyped and modernized UI tools using QML and C++; created Figma-based UI assets on team feedback.

Software Developer Intern — **July 2023—August 2023**
4835 Studios, Inc. — *Chicago, IL*

• Developed a CMS with Model-View-Controller (MVC) architecture, leveraging C#, ASP.NET, and ReactJS for robust functionality. Engineered a responsive user interface using Tailwind CSS and Vite, integrated with conventional HTML/CSS practices.

• Effectively orchestrated the deployment and hosting of the website on Microsoft Azure Cloud, incorporating Azure SQL Database for data management of blogs, contact messages, and job applications, deployed to a GoDaddy-hosted domain.

Software Engineering Fellow — **May 2023—July 2023**
Headstarter — *Chicago, IL (Remote)*

• Gained valuable insights through mentorship from Fortune 500 software engineers, focusing on industry best practices.

• Developed a ReactJS/ExpressJS task management system using AWS Amplify for authentication, Lambda functions to handle backend logic and DynamoDB integration, deployed via Vercel.

• Created a ReactJS and Flask weather dashboard using OpenMeteo APIs, OpenAI's text-davinci-003 model, and Twilio for SMS notifications. Used Google Cloud's Firebase for caching and Heroku for deployment, ensuring a responsive front-end with Material UI.

Web Application Developer Intern — **May 2022—May 2023**
Americaneagle.com — *Des Plaines, IL*

• Led full development lifecycle for .NET-based e-commerce site enhancements using TypeScript, ASP.NET, .NET Entity Framework, and VB.NET, using LINQ and SQL queries for data retrieval and reporting from MS SQL Server to support client decision-making.

• Collaborated with cross-functional teams using Git workflows in Azure DevOps/TFS for CI/CD, reducing deployment issues and improving efficiency.

PROJECTS

Know-Your-Government: Java-based Android app displaying political officials' data. Leveraged Google Civic APIs, Android Fused Location, and Picasso for image handling, with integration for social media links.

Vehicles API Web Service: Scalable API with Spring Boot for vehicle CRUD operations, integrated external pricing and Google Maps location data. Used Swagger for documentation, ControllerAdvice for error handling, and Eureka for service discovery and integration.

Spray Paint Application: Developed a desktop image editing tool using C# and WPF with MVVM architecture, featuring spray painting, erasing, undo/redo history, and customizable brush controls on a user-loaded image.

Soccer Stadium Analytics: ETL pipeline using Python and Docker to scrape data from Wikipedia with BeautifulSoup. Leveraged Apache Airflow and Azure Data Factory for data cleaning and loading into Azure Synapse, allowing for visualization in Tableau.

Real-Time Sign Detection: Trained a real-time hand sign detection model using TensorFlow and OpenCV2. Developed in Python, deployed with ReactJS, and integrated via NodeJS. Exported and hosted the model via TensorFlowJS on IBM Cloud.