# Hamza Siddiqui

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EDUCATION

Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI) Anticipated May 2024 Bachelor of Science in Computer Engineering (CGPA: 3.38 / 4.00) Topi (Swabi), PK

• Relevant Coursework: Full Stack Development, DevOps, Deep Learning, Intro to AI, Operating Systems, Intro to Databases, Data Structures and Algorithms, Computer Organization, Object Oriented Programming

### Experience

## **Keystone Consulting**

June 2023 – August 2023

Software Developer Intern Remote (Islamabad, PK)

- Led the development of an advanced business intelligence visualization application leveraging Natural Language Processing techniques, enhancing data interpretability and decision-making processes.
- Employed Flask, Python, React.js, and Next.js; contributing to a seamless UI and efficient back-end functionality.
- Engineered the integration of LangChain and OpenAI technologies into the chatbot system; achieving a 70%+ accuracy in chatbot response and a 25% decrease in response time.

NETRONIX GIKI April 2023 – Present

Lead Residential Network Administrator

Topi (Swabi), PK

- Managed GIK Institute's residential network compromising of 3500+ nodes, ensuring robust performance.
- Designed and conducted comprehensive training sessions and workshops on computer networking for students.
- Provide and maintain peer-to-peer file sharing and IPTV services for 3000+ residents of GIK Institute.

Mantula Solar

July 2022 – August 2022 Software Engineer Intern Remote (Stellenbosch, SA)

- Collaborated with a team of 5 full-stack web developers to engineer Mantula Solar's user-friendly web application, utilizing React.js, Firebase, and Bootstrap.
- Designed and integrated a decision tree-based price estimator, along with connecting APIs to align with customer preferences, resulting in a 20% increase in user engagement and a 15% improvement in conversion rates.
- Leveraged various NPM packages, contributing to a sophisticated and seamless user experience, and documented the software development lifecycle, paving the way for future enhancements and maintenance.

# Projects

## NLP-Powered Business Intelligence | Final Year Project | Next.js, Flask, Python, PostgreSQL, Firebase

- The project aims to simplify the process of business intelligence reporting for non-technical users by leveraging natural language processing techniques and incorporating open-source large language models.
- Developed a full-stack application that utilizes an LLM to interpret user queries, fetch required data, and generate data visualizations. The platform allows users to customize and save these charts to personalized dashboards.

#### H.E.L.I.X. IoT-Based ChatBot | Group Project | Python, Rasa, Flask, HTML, CSS

• Built an IoT-based Chatbot featuring voice and text input functionality, enabling users to control devices. Implemented a user-friendly app and implemented voice recognition for identification, achieving 78% accuracy.

## Line and Light Following Robot | Group Project | C, Arduino

• Engineered a line-and-light following robot by programming an Arduino Uno with light sensors and motor controls. Achieved a 90% success rate in navigating a solid black line during test runs.

# University Complaint Portal | Group Project | PHP, HTML, CSS, MySQL

• Built a website, enabling 2000+ university residents to lodge and track their complaints and feedback.

#### Console-based Text Editor | Individual Project | C, Linux

• Created a simple text editor for a Linux environment by employing Linux system calls in C.

## Technical Skills

Languages: C, C++, Python, Bash, Matlab, JavaScript, TypeScript, PHP, HTML, CSS, SQL

Technologies: Flask, React.js, Next.js, React Native, Express.js, Node.js, Bootstrap, TailwindCSS

Databases: PostgreSQL, Oracle, MySQL, MongoDB, Firebase, Sanity

Tools: VS Code, Linux Command Line, Vim, Make, Git, GitHub, OpenSSH, AWS, Docker, Terraform