# Nazish Akhtar

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## Education

**Sept 2022 - Sept 2023** — **MSc Advanced Computer Science**, *University of Birmingham*, Birmingham, UK

**Aug 2016 - Aug 2020** — **Bachelor of Technology Computer Science**, *University of Petroleum and Energy Studies*, Dehradun, India

## Experience

**May 2019 - Nov 2021** — **Co-Founder/Engineering Head**, *Venido Cabs*, Dehradun, India

As Head of Engineering, I tackled a core challenge—enhancing the user experience for ride services. Leading the software development team, I created a platform that facilitated seamless interaction among users, drivers, and fleet operators, streamlining processes like ride booking and transaction completion. The implementation of an admin section empowered verified administrators to efficiently oversee operators. More details below:

- Led system design, product development, and cloud deployment using AWS, while managing a small team.
- Engineered a real-time event streaming service using Kafka to ensure seamless user experiences and it managed a daily load of 200,000 events.
- Implemented ElasticSearch for efficient storage, monitoring, and data processing of GPS coordinates.
- Architected and developed microservices using Node.js and Django with RESTful APIs, managing user authentication, database operations, and real-time services, while utilising Django REST Swagger for API documentation.
- Worked with map matching and Google S2 library.

**Aug 2018 - May 2019** — **Freelancer**, *Web/Backend Developer*, Dehradun, India

- Led backend development for mobile applications and demonstrated full-stack proficiency in web application development.
- Employed a wide array of cutting-edge technologies, including Django/DRF, PHP, JavaScript, MySQL, Redis, Pusher, and Nginx.
- Innovated and delivered several Point of Sale (POS) systems customised for local bars, restaurants, and businesses.
- Enhanced web and backend performance, reduced loading time by 20%, and decreased server response time by 15%, while implementing cost-effective decision-making between long polling and WebSockets, for TDX, a mobile application.
- Prototyped new features and modules, conducting testing and gathering invaluable user feedback.

## Languages

**Proficient** — Python, JavaScript

**Experienced** — Go, PHP, Java

**Familiar** — C, bash

## Tools/Frameworks

- Django/DRF, Node.js, React, Flask, Docker, Kafka, ElasticSearch, Celery, Jenkins, Selenium, git, Android, LaTeX

## Projects

**NFT-Tracker**

- Led the development of a web platform designed to monitor and analyze daily activities within the NFT (Non-Fungible Token) space across social media platforms, including Twitter, Facebook, Discord, and OpenSea.
- Empowered users to curate their favorite NFT projects, enabling the ability to receive real-time notifications based on project growth rates.
- Leveraged cutting-edge technologies, including Django/Django cookiecutter, Django Rest Framework (DRF), PostgreSQL, Celery, and Flower, to construct a robust and scalable backend infrastructure.
- Delivered a valuable tool for NFT enthusiasts and investors, aiding in the identification of promising projects and opportunities within the NFT ecosystem.

### The Drinks Exchange (TDX)
○ Developed an application inspired by stock exchanges, where drink prices fluctuated in real time based on consumption levels.
○ Assumed the role of a backend developer, designing and crafting the application's architecture.
○ Engineered and deployed a comprehensive admin section, equipped with essential features such as daily task management, OTP verification, real-time price fluctuations, and online payment system.
○ Implemented a range of technologies (PHP, MySQL, PubNub, Redis, HTML5, CSS, Bootstrap, JavaScript/jQuery) at the backend and Android(Java) was used for the front-end.
○ Maintained the application for a year, during which it processed over 10,000 orders and served more than 1,500 users, ensuring continued scalability and bug fixing.

### SmartPatrolGIS
○ Developed a Geographic Information System (GIS) software for the Wildlife Institute of India.
○ Identified and monitored areas in wildlife reserves prone to poaching.
○ Processed and analyzed shapefiles, employing innovative superimposition techniques to extract actionable insights for wildlife preservation.
○ Developed an A*-based algorithm for optimizing wildlife patrol routes, targeting poaching hotspots for effective wildlife protection.
○ Empowered users, wildlife security guards, to contribute valuable data about each cell of the shapefile, enabling assessments of the area's vulnerability to poaching.
○ Implemented frontend in PyQt, providing an intuitive and user-friendly interface for data visualization and interaction and employed SQLite for efficient backend data storage.
○ Leveraged powerful libraries, including Shapely, Fiona, and Matplotlib, on the backend to ensure robust geospatial analysis and visualization capabilities.

### B10S-Magazine App
○ Developed a mobile application tailored for the biannual School of Computer Science magazine, delivering an engaging and interactive reading experience to users.
○ Assumed full responsibility for the backend development, expertly overseeing the creation of essential components, including an advertisement section, a blog platform, an EPUB viewer, and a feature-rich comment section.
○ Designed and implemented a robust admin section, offering seamless content management and editing capabilities, ensuring the application remained up-to-date and relevant.
○ Leveraged technologies such as Django/DRF, RabbitMQ, PostgreSQL, and Pusher to enable real-time synchronization, enhancing user engagement and ensuring timely content delivery.

## Achievements

### Represented my Startup at NC-RISE
○ Date: Feb 2019
○ Description: Showcased a proprietary IOT device at NC-RISE at the national level, a part of RISE, the largest tech gathering in Asia.

### Featured in The Quint (an Indian Newspaper)
○ Date: Oct 2021
○ Description: The startup was mentioned in the following article by Quint: Stellar Models of Entrepreneurship and Innovation at UPES