

## Contact

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## Top Skills

Artificial Neural Networks  
Neuro-Linguistic Programming (NLP)  
Recommender Systems

## Languages

Urdu (Full Professional)  
English (Professional Working)

## Certifications

NGINX Web Server from Scratch  
Practical Web Development with  
Docker, Django, Nginx, Redis  
Master Class: React + Typescript  
2021 Web Development  
Scientific Python: Data Science  
Visualization Bundle 18 Hrs!  
API Engineer: Node | Python |  
Django | Postman | PostgreSQL

## Honors-Awards

YOUTH ICON AWARD 2021  
GLOBAL RECOGNITION AWARD  
2024  
Most Admired Personality in 2024

## Publications

The Clouded Side of ChatGPT  
The Human Element in  
Cybersecurity: Why It Matters

# Arslan Zaheer

Award-Winning Senior Python Backend Engineer | AI/LLM Architect  
| Cybersecurity & Ethical Hacking Specialist | Data Engineering  
Leader | Cloud DevOps (AWS, Azure, GCP) | Building Secure,  
Scalable, AI-Driven Systems

London, England, United Kingdom

## Summary

Award-winning engineer with a passion for building the future at the intersection of Python backend, AI/LLM, cybersecurity, data engineering, and cloud DevOps.

From architecting robust backend systems and fine-tuning large language models to securing mission-critical applications and optimizing cloud infrastructure, I help organizations innovate and scale with confidence.

## What Drives Me

My journey began with a fascination for solving complex problems through code—a passion that's evolved into designing secure, AI-powered systems that deliver real-world impact. Whether reducing cloud costs by 30%, deploying AI-driven fraud detection that boosts security accuracy by 40%, or leading teams to deliver high-throughput APIs handling millions of daily requests, I thrive on turning technical challenges into business value.

## Core Expertise:

# Python Backend & API Engineering: Building scalable, resilient applications with Django, FastAPI, DRF, and Node.js.

# AI/LLM Architect: Designing, fine-tuning, and deploying large language models and AI chatbots for real-world applications.

# Cybersecurity & Ethical Hacking: Implementing security best practices, penetration testing, and compliance (SOC-2, ISO-27001), with a proven track record in reducing vulnerabilities and safeguarding data.

# Data Engineering: Creating ETL pipelines, real-time analytics, and scalable data architectures to drive actionable insights.

# Cloud & DevOps: Automating infrastructure, optimizing deployments, and ensuring 99.9% uptime across AWS, Azure, and GCP.

### Real-World Impact

- ✓ Reduced cloud costs by 30% while maintaining enterprise-grade reliability.
- ✓ Developed AI-powered fraud detection, improving security accuracy by 40%.
- ✓ Designed high-throughput APIs for millions of daily users.
- ✓ Automated security assessments, cutting breach attempts by 30%.
- ✓ Integrated AI chatbots to enhance customer engagement and workflow automation.

### Recognitions & Values

Honored with the Youth Icon Award (2021), Global Recognition Award (2024), and Most Admired Personality (2024), I'm committed to continuous learning, mentoring, and pushing the boundaries of what's possible with technology.

I am open to consulting, collaborations, and AI-driven projects. Let's connect to explore how I can help your organization build secure, scalable, and innovative solutions for tomorrow.

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## Experience

### Turing

AI Engineer | Python & LLM Specialist

October 2024 - May 2025 (8 months)

At Turing, I drive innovation in next-generation AI assistants by merging Python expertise with large language model (LLM) optimization. My work bridges engineering rigor with AI research to solve cutting-edge coding challenges through:

- Python Solution Development: Architecting scalable Python systems that power core AI functionalities, prioritizing efficiency and maintainability in complex problem-solving environments.
- LLM Training Pipeline Design: Building end-to-end workflows for fine-tuning language models using advanced techniques like chain-of-thought prompting and reinforcement learning from human feedback (RLHF).
- Performance Benchmarking: Implementing rigorous evaluation frameworks that assess model accuracy on real-world programming tasks, with metrics-driven optimizations improving success rates by 70% quarter-over-quarter.
- Cross-Functional R&D Synergy: Partnering with ML researchers and product teams to translate theoretical concepts into production-ready features, particularly in code generation and algorithmic reasoning domains.
- Data-Driven Model Refinement: Applying statistical analysis to diverse datasets to identify performance bottlenecks and training opportunities.

## Bodytrak®

Sr. Backend Developer, AI & Cybersecurity Engineer

January 2023 - October 2024 (1 year 10 months)

Farrington, England, United Kingdom

- Led the backend architecture for Bodytrak's award-winning in-ear safety platform, enabling real-time physiological monitoring (core body temperature, heart rate, HRV, noise exposure, fatigue) and high-precision geolocation across industrial and hazardous environments.
- Engineered and optimized event-driven microservices and ETL pipelines (Python, Node.js, Airflow, Kafka, RabbitMQ), powering instant alerts, incident reporting, and seamless integration with client safety systems.
- Developed advanced geolocation and geofencing features with HERE Maps, supporting X, Y, Z coordinate tracking and automated safety zone enforcement for multi-story and complex sites.
- Implemented robust security and compliance protocols (end-to-end encryption, MFA, RBAC), achieving 100% adherence to GDPR, HIPAA, ISO 27001, SOC 2, and ISO 27701, and ensuring secure, privacy-first data handling.
- Automated vulnerability assessments and penetration testing (Python, Golang), proactively reducing breach risks and strengthening platform resilience.

- Collaborated cross-functionally with hardware, firmware, ML, and product teams to deliver features like man down detection, SOS alerts, and customizable alert thresholds, directly impacting worker safety and rapid emergency response.
- Drove RESTful API integration and containerized deployments (Docker, Kubernetes, Terraform), ensuring scalable, reliable, and rapid product releases.
- Contributed to the launch and testing of Bodytrak 1 IS for hazardous industries, supporting ATEX/IECEx certification and ruggedized, intrinsically safe operation.
- Supported the achievement of multiple industry awards (OHS New Product of the Year, Industrial Hygiene Awards, ID&E Awards) through direct contributions to innovative, market-leading features.

## Algebra Intelligence

### Senior Information Technology Consultant

September 2021 - December 2021 (4 months)

I have worked on this project as a Data Engineer, focusing on building scalable and efficient data pipelines, ensuring data integrity, and implementing best practices for data engineering workflows. My contributions included the following:

#### Core Contributions:

- Designed and developed ETL pipelines to extract, transform, and load large datasets from multiple sources into centralized databases.
- Automated data ingestion processes to handle diverse file formats and integrate seamlessly with downstream systems.
- Applied advanced data transformation techniques to clean, normalize, and enrich raw data, ensuring it was ready for analytics and reporting.
- Designed optimized database schemas to support efficient querying and storage of structured and semi-structured data.

- Conducted performance tuning on data pipelines and queries to minimize latency and ensure scalability.
- Collaborated with stakeholders to identify key data requirements and implemented solutions aligned with business goals.
- Implemented robust data validation checks to detect and resolve inconsistencies during data ingestion and transformation.
- Built automated monitoring systems to ensure data pipeline reliability and promptly address failures or discrepancies.
- Developed and enforced data governance standards to maintain high data quality throughout the pipeline.
- Utilized Git for version control, managing pipeline scripts and configuration changes in a collaborative team environment.
- Participated in code reviews to maintain high-quality code standards and shared knowledge across the team.

#### Point Laz Mining LiDAR Expert

##### Sr. Full Stack Developer & Team Lead

November 2020 - December 2021 (1 year 2 months)

Quebec, Canada

- Developed and optimized full-stack web solutions leveraging Python, Node.js, and Raspberry Pi, achieving a 30% improvement in system performance and reducing development time by 20%.
- Designed and implemented a complete data pipeline, integrating data from IoT devices (Raspberry Pi) into cloud platforms and developing interactive dashboards for real-time monitoring, enabling enhanced decision-making and operational insights.
- Led DevOps initiatives, streamlining deployment pipelines through CI/CD workflows and automated testing, improving system reliability by 40% and ensuring rapid, error-free deployments.

- Implemented advanced security protocols, achieving 100% compliance with SOC-2, ISO-27001, and ISO-27701 standards, and reducing vulnerabilities by 25%

to protect sensitive operational data.

- Integrated AI and ML algorithms for predictive maintenance and real-time hazard detection, reducing downtime by 15% and improving mine safety by 20%

through proactive issue resolution.

- Collaborated with cross-functional teams to develop innovative solutions that improved mining safety practices and reduced on-site incidents by 10%, showcasing

the ability to merge technical expertise with real-world impact.

## Optery

### Senior Software Engineer

January 2021 - April 2021 (4 months)

At Optery, I contribute to the development and optimization of robust systems aimed at enhancing user privacy and security. My role involves a blend of backend and frontend development, data modeling, and system optimization to deliver reliable and user-friendly solutions.

#### Core Contributions:

- Developed and maintained backend code with Django Rest Framework (DRF), creating secure and efficient API endpoints and performing comprehensive testing to ensure reliability.

- Built responsive and dynamic frontend interfaces using React/Next.js, improving user experience and engagement.

- Designed and optimized data models, providing actionable suggestions to enhance data processing and system performance.

- Debugged and optimized code for better performance and scalability, ensuring efficient operation of critical systems.

- Collaborated effectively with cross-functional teams to refactor and maintain codebases, ensuring maintainability and adherence to best practices.
- Modified and built Django templates using HTMX, creating interactive and dynamic UI components.
- Implemented improvements to enhance system functionality, reduce errors, and align with user and business needs.

By combining expertise in backend development, frontend technologies, and collaborative problem-solving, I deliver solutions that meet high standards for security, performance, and usability.

### codeFulcrum

#### Senior Full Stack Python Developer | Team Lead

July 2019 - October 2020 (1 year 4 months)

Lahore, Pakistan

- Developed and delivered 25+ high-performing mobile, web, and desktop applications using Python (Flask, Django, FastAPI, DRF), and Node.js (Express.js, NestJS), achieving a 25% increase in user satisfaction through robust, scalable solutions.
- Led a team of 15 developers across multiple projects, ensuring high-quality software delivery with a 100% on-time completion rate, while fostering a collaborative and productive team environment.
- Designed and implemented innovative software solutions in collaboration with cross-functional teams, utilizing React.js, Flask, and Django, which reduced development cycles by 20% and enhanced alignment with client requirements.
- Integrated AI and ML capabilities into applications using Python (TensorFlow, PyTorch) to enhance predictive analytics and user engagement, resulting in a 30% improvement in user metrics and actionable, data-driven insights.
- Streamlined deployment pipelines and ensured scalability by employing Docker, Kubernetes, and Jenkins, achieving a 95% client retention rate and securing multiple repeat contracts through consistent quality and adherence to industry best practices.

### Crowdbotics

## Senior Software Development Engineer

April 2018 - October 2020 (2 years 7 months)

I worked as a Senior Software Development Engineer with Crowdbotics on a freelance basis, completing over 30 successful projects for mobile, desktop, and web applications. My expertise in backend development, API design, and database architecture enabled me to deliver scalable, secure, and efficient solutions tailored to diverse client needs.

### Core Contributions:

- API Development: Designed and implemented RESTful APIs for seamless communication between front-end interfaces and back-end systems, supporting real-time syncing, authentication, payment processing, and other functionalities. Ensured performance, security, and scalability.
- Database Design: Created efficient, secure database schemas for relational databases (PostgreSQL, MySQL) and NoSQL databases (MongoDB). Ensured data integrity with robust validation and error-handling mechanisms.
- Customization and Scalability: Built customized backend architectures and scalable systems capable of handling high traffic and large datasets across various industries.
- Third-Party Integration: Integrated APIs with platforms like Stripe, PayPal, and messaging services, ensuring compatibility and seamless operation.
- Optimization and Security: Conducted performance tuning to minimize latency and implemented security best practices to protect sensitive data.
- Collaboration and Documentation: Worked with front-end developers and clients to align technical implementations with project requirements. Maintained comprehensive documentation for APIs and database models.
- Delivered 30 projects across industries, including e-commerce platforms, booking systems, CRM tools, and social networking apps, with a 100% success rate.
- Earned positive feedback from clients for meeting tight deadlines and exceeding expectations.



- Demonstrated strong problem-solving skills by debugging complex issues and optimizing solutions.

## Upwork

Sr. Full-Stack Developer - 3% Top Rated Plus Freelancer

January 2015 - May 2019 (4 years 5 months)

Pakistan

As a freelance Full-Stack Engineer with over 8 years of experience, I help businesses unlock their digital potential by designing and developing robust, scalable, and modern web applications. I specialize in creating seamless front-end experiences and efficient back-end systems powered by cloud infrastructure and data-driven insights.

### Core Technologies:

- Front-End: React.js, TypeScript, AngularJS, Vue.js, HTML5, CSS3, WebSocket
- Back-End: Node.js, Express.js, Flask/FastAPI, Django, Laravel, Ruby on Rails, Golang
- Full Stack: Next.js, Microservices, RESTful APIs, GraphQL
- Databases: MySQL, PostgreSQL, MongoDB, DynamoDB, Redis
- AI & Data: Data Analysis, AI/ML Integrations

### Additional Skills:

- Web Scraping: BeautifulSoup, Scrapy, Selenium
- Automation & Testing: Pytest, JUnit, Appium, Postman
- Payment Systems: Stripe, PayPal
- CI/CD & DevOps: Automation, Secure Pipelines
- Cloud Platforms: AWS, Azure, Google Cloud
- Cybersecurity & Compliance

### Key Achievements:

- Developed a GPT-powered chatbot that increased accuracy by 85%
- Built real-time analytics dashboards, reducing reporting time by 70%
- Fine-tuned LLMs for NLP tasks, saving 40+ hours/week
- Automated CI/CD pipelines, reducing deployment time by 80%

I consistently deliver high-performance solutions by blending technical expertise with a collaborative approach. My commitment to continuous learning and innovation ensures that my clients always stay ahead in an evolving tech landscape,

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## Education

University of Portsmouth

Master's degree, CYBER SECURITY AND FORENSIC INFORMATION  
TECHNOLOGY · (January 2022 - January 2023)

University of the Punjab

Bachelor's degree, Computer Software Engineering · (September 2015 - June  
2019)