

Muhammad Murad Siddiqui

Frankfurt, Hesse, Germany

(+49) · 15560026847 ♦ muradsiddiqui99@gmail.com

<https://www.linkedin.com/in/murad-siddiqui/> ♦ <https://www.muradsiddiqui.me> ♦ <https://github.com/MuradSiddiqui>

SUMMARY

Inquisitive and driven software engineer passionate about turning ideas into intelligent, scalable systems. Skilled across the stack with Python, JavaScript, and modern frameworks, I focus on building seamless user experiences backed by solid architecture. Whether integrating LLMs, optimizing data pipelines, or refining frontend design, I approach every challenge with curiosity, precision, and a constant drive to improve.

EXPERIENCE

DIPF — Leibniz Institute for Research and Information in Education

April 2024 - Present

Software Engineer - Part-time

Frankfurt, Germany — Remote

- Contributed to the development of an interactive learning platform by building and enhancing dashboards for both participants and experts using Next.js and Material-UI.
- Improved frontend architecture and user workflows to align with the updated design system and enhance accessibility across user roles.
- Successfully deployed the application on self-hosted servers using GitLab CI/CD pipelines.
- Collaborated with backend teams to implement a Django-based video pipeline, ensuring seamless video retrieval and playback.
- Resolved Docker and Celery configuration issues to stabilize asynchronous task processing and improve deployment reliability.
- Delivered UI optimizations and bug fixes to ensure smooth rendering, consistent performance, and cross-browser responsiveness.
- Participated in Agile sprint meetings to plan, track, and align development milestones with project goals.

Seasn — Goethe Universität

September 2024 - Present

AI Software Engineer - Part-time

Frankfurt, Germany — Remote

- Engineered and deployed a hybrid AI search system combining knowledge-graph (Neo4j) and vector-search (Qdrant) technologies for intelligent profile matching at scale.
- Developed a natural-language query parser to convert free-text user inputs into structured graph queries, enabling flexible search experiences.
- Designed product-user relationship schemas in Neo4j, with numerical filters and relationship weights, to support fine-grained matching logic.
- Created a semantic-search pipeline using SentenceTransformer embeddings over a multimillion-entry dataset, delivering real-time relevance and retrieval.
- Enhanced backend architecture and performance through rigorous testing, optimization, and scalable design to support high-volume data retrieval.
- Led development of an agent-orchestration layer for AI workflows, integrating multiple tools to automate complex tasks and maintain guardrails for safe operation.
- Collaborated across teams to define prompt strategies, design evaluation frameworks, and ensure system reliability in production.

HashPotato

January 2023 – March 2024

Software Engineer - Full-time

Karachi, Pakistan

- Drove key development initiatives using Python, Django, Node.js, PostgreSQL, MySQL, and Docker to enhance system functionality and efficiency.
- Designed, developed, and maintained scalable microservices, reducing downtime by 25% and improving overall service reliability.
- Built and optimised RESTful APIs for core services, increasing data processing speed by 40% and improving user experience across platforms.
- Created consistent and reusable frontend components with ShadCN and modern UI frameworks to improve design cohesion and developer productivity.
- Containerized backend and frontend applications with Docker, ensuring reproducible builds and smooth deployment pipelines.
- Implemented CI/CD pipelines using Jenkins for automated build, testing, and deployment across multiple environments.
- Followed Agile and TDD practices, maintaining 60% test coverage while ensuring high-quality, maintainable code.
- Collaborated in pair programming sessions and code reviews, and knowledge transfer within the team.
- Partnered with cross-functional teams to diagnose performance bottlenecks and refactor services for scalability and maintainability.

HashPotato

December 2021 - August 2022

Software Engineer - Intern

Karachi, Pakistan

- Assisted in the development of responsive web applications using React.js, Next.js, and Material-UI, enhancing usability across multiple devices and browsers.
- Supported backend integration by developing and testing RESTful APIs to enable dynamic front-end and back-end communication.

- Collaborated with senior developers in Agile sprint cycles, contributing to daily stand-ups, code reviews, and project planning sessions.
- Gained hands-on experience in modern web architecture, version control with Git, and real-world client project workflows.

EDUCATION

Frankfurt University of Applied Sciences, Frankfurt, Germany M.Sc. in High Integrity Systems	March 2024 - March 2026
Institute of Business Management, Karachi, Pakistan B.Sc. in Computer Science 50% Merit Scholarship Grade: 3.49/4.0 (German: 2.0)	August 2019 - May 2023

ACHIEVEMENTS & AWARDS

Appreciation Award COMPEEC	May 2023 Karachi, Pakistan
· Presented the Bachelor's Thesis project (UniBoard) at COMPEEC, a national computer project exhibition featuring participants from universities across Pakistan. · Received an Appreciation Certificate for innovation and technical implementation among university-level projects.	
First Place – IoBM FYP Showcase	April 2022 Karachi, Pakistan
· Presented the Bachelor's Thesis project (UniBoard) at the IoBM Final Year Project Showcase. · Achieved 1st place among top projects within the university for innovation, design, and technical implementation.	

PROJECTS

University Management System – (UniBoard) Bachelor's Thesis	August 2022 - May 2023 Karachi, Pakistan
· Engineered a full-stack university management system using Node.js, JavaScript, EJS, SCSS, and CSS, enabling students and faculty to manage academic resources through a centralized portal. · Designed and implemented a room scheduling algorithm leveraging weighted logic to optimize allocations based on seniority, disability, and class size. · Developed modular backend APIs in Node.js for user management, scheduling, and data persistence, ensuring efficient communication between client and server. · Built dynamic, responsive UI components using EJS templates and SCSS, enhancing user experience and cross-device compatibility. · Followed Agile development practices, conducting code reviews, debugging sessions, and iterative testing to ensure production-grade reliability. · Achieved 1st place at the IoBM Final Year Project Showcase, recognized for technical execution, system design, and innovative impact.	
Cleanify HIS Master's — Project	April 2025 - August 2025 Frankfurt, Germany
· Designed a modular pipeline for dataset uploads, cleaning operations, and real-time visualization using WebSockets. · Built a full-stack data preprocessing platform using React.js, TypeScript, Tailwind CSS, and Supabase. · Implemented data validation, schema inference, and transformation logging to ensure reliability and integrity. · Collaborated in a two-person team, emphasizing scalability, code quality, and system robustness.	

TECHNICAL STRENGTHS

Programming Languages	Python, JavaScript, TypeScript, C/C++, HTML, CSS
Protocols & APIs	XML, JSON, REST, GraphQL, WebSocket
Databases	MySQL, PostgreSQL, Supabase, Qdrant, Neo4j
Frameworks	Next.js, React.js, Django, Flask, FastAPI, LangChain, NumPy, TensorFlow, PyTorch
Cloud & DevOps	AWS, Azure, Docker, Jenkins, Elasticsearch, Redis, Celery, Postman
Testing & Tools	Pytest, Selenium, Git, GitLab CI/CD
Development Practices	Clean Code, Test-Driven Development, Agile, Scrum

LANGUAGES

English	C1
German	A2