

# TOUHID AHMED

## Software Developer



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### SUMMARY

Backend-focused Python developer (M.Sc. in Automation, Deutsch B1+) with 1+ years of experience in backend and API development using Django REST Framework and FastAPI. Skilled in RESTful architecture, database design, and Agile collaboration. Strong analytical and problem-solving mindset.

### WORK EXPERIENCE

10/2024 – 10/2025

Rüsselsheim, Germany

#### Software Developer, SEGULA Technologies Services GmbH

- **Developed** multiple backend and automation tools in Python for vehicle data and project reporting workflows.
- **Fleet Management Web App:** Designed backend architecture with REST APIs, authentication, and reporting; implemented unit, integration, and UAT tests. (*Django, DRF, Pytest*)
- **Desktop Reporting Tool:** Built a GUI for Excel/Parquet data parsing, report generation, and visualization. (*Python, Pandas, PySide6*)
- **RFQ Dashboard:** Automated RFQ PDF extraction via OCR and preprocessing for LLM-based summarization. (*Python, Pandas, Tesseract, Pillow*)
- **Followed Agile/Scrum** practices, version control (GitLab), CI/CD pipelines, and API testing (Postman/Insomnia).

10/2023 – 03/2024

Rüsselsheim, Germany

#### Intern, SEGULA Technologies Services GmbH ☀️

- Conducted feasibility analysis of communication technologies for swarm vehicle testing, evaluating *Automotive Ethernet, CAN, LIN, C-V2X, Li-Fi, and DSRC*.
- Developed **AI Recruiter** tool for automated candidate outreach using LinkedIn data and OpenAI API integration; automated browser workflows with Selenium. (*Python, BeautifulSoup, OpenAI API, Selenium, Tkinter*)

07/2023 – 09/2023

Rüsselsheim, Germany

#### Working Student, SEGULA Technologies Services GmbH ☀️

- Implemented an algorithm in Python for vehicle turn detection in urban street networks using geospatial data workflows. (*Python, OSMnx, Jupyter Notebook, Matplotlib*)

08/2022 – 10/2022

Darmstadt, Germany

#### Intern (Automation Test Engineer), TechRoad GmbH ☀️

- Set up and maintained the testbench for ECU validation and diagnostics.
- Worked with MFK5 ECU module and in-vehicle communication protocols (CAN, SOME/IP, Automotive Ethernet, UDS).
- Performed diagnostics and ECU flashing using CANoe; supported test verification and reporting. (*Vector CANoe, UDS*)

### EDUCATION

05/2022 – 09/2024

Darmstadt, Germany

#### Master of Science in Electrical Engineering, Darmstadt University of Applied Sciences ☀️

- Focus: Automation
- Grade: 2.1 (Gut)
- Thesis topic: Design and development of a **vehicle fleet management web application**.

05/2015 – 05/2019

Dhaka, Bangladesh

#### Bachelor of Science in Electrical and Electronic Engineering, North South University ☀️

- Major subjects: High-voltage engineering, Switchgear protection, Fiber optics
- Awards: **Magna Cum Laude with Honors**

## **RELEVANT PROJECTS**

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09/2025

### **Server Management API with FastAPI** ↗

- Developed a RESTful API for managing servers and datacenters using FastAPI and PostgreSQL.
- Implemented CRUD and health-check endpoints with OpenAPI/Swagger documentation and example schemas.
- Designed a per-request database connection dependency for clean session handling, *JSONB* storage for flexible configurations, and standardized error responses (404/409/422). (*FastAPI, PostgreSQL, psycopg3, Pydantic, Swagger/OpenAPI*)

## **KEY SKILLS**

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**Backend Development:** FastAPI, Django, Django REST Framework, asyncio, REST API design, JWT authentication, OpenAPI/Swagger, Postman, Insomnia

**Databases:** PostgreSQL, MySQL, SQLite, Firebase (NoSQL)

**Testing & Quality Assurance:** Pytest (unit/integration), Selenium (basic), User Acceptance Testing (UAT)

**Programming Languages:** Python, C++, MATLAB (academic)

**Data & ML (Python):** NumPy, Pandas, Matplotlib, scikit-learn, TensorFlow, OpenCV, BeautifulSoup, pytesseract

**Web & UI:** HTML, CSS, JSON, Tkinter, PyQt5, PySide6

**Tools & Workflow:** Git, GitHub/GitLab, GitLab CI, Linux (Ubuntu), Agile/Scrum, Code Reviews, Confluence/SharePoint, VSCode, PyCharm, Jupyter

## **LANGUAGE**

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**German – B1+:** Independent, confident in everyday and professional situations

**English - C1:** Fluent in spoken and written language