CH HAMZA AKBAR

Phone number: (+49) 17665117254 (Mobile) | **Email address:**

chhamzaakbar@outlook.com | **Email address:** ch_hamza.akbar@mailbox.tu-dresden.de |

Website: https://github.com/chhamzaakbar

ABOUT ME

A dedicated, goal-oriented, and tech-savvy graduate student of Fakultät Informatik - TU Dresden, seeking to pursue further opportunities for utilizing my academic and analytical knowledge by affiliating with a renowned organization.

DIGITAL SKILLS

PostgreSQL | InfluxDB | Python(Django, Scipy & PyTorch) | CSS/JavaScript | MS-Power BI/Tableau | SPARQL/ Datalog | Git | Docker | HPC (C and C++) | Linux (Ubuntu, Linux Mint) | Databricks | StarUML | Jira

WORK EXPERIENCE

04/2023 – CURRENT Dresden, Germany
WERKSTUDENT - DATA ANALYSIS & REPORTING SUNFIRE GMBH

- Assisting the software development team in creating tools for collecting and evaluating data across multiple datasets in a time series **Influx database**.
- Participating in an agile sprint-based environment (**Jira**) to create various **Jupyter-based** tools and contributing to the departmental confluence (wiki) space.
- Utilized advanced **Python** libraries, addressing data **preprocessing**, **querying**, the creation of synthetic time series with diverse properties, and the development of robust and precise **algorithms** for identifying multiple properties within **time-series** data.

01/07/2023 – 30/10/2023 Dresden, Germany
WISSENSCHAFTLICHE HILFSKRÄFTE (WHK) SCADS.AI DRESDEN

- Analyzing walkability index, sustainable neighborhood criteria, and assessing accessibility to amenities from public transit using spatial distance measures using **Python**-based tools.
- Leveraging machine learning techniques to create a high-quality **synthetic dataset** for the transportation industry, which served as valuable **training** data for the developed models.

02/2023 – 07/2023 Dresden, Germany
WISSENSCHAFTLICHE HILFSKRÄFTE (WHK) CAPTIS SPACE SYSTEMS

- Engineered a high-performance **Django**-based application for **CubeSat** prototype operations, incorporating **backend database** pipelines and seamlessly integrating system **control mechanisms** to ensure fault tolerance and scalability criteria.
- Utilized Serialization and Parallel Threading to optimize **RESTful API integration** for enhanced performance.
- Custom implementation and optimization of navigation capabilities including obstacle avoidance and asymptotic convergence using advanced **data structures algorithm**.

10/2016 – 04/2017
BUSINESS OPERATIONS INTERN THE CATALYST GIK INCUBATOR

-Provided both promotional and technical assistance to a startup at the pre-launch stage through part-time and remote activities within GIKI.
-Developed the **quantitative research hypothesis** by engaging local government branches and student bodies to conceptualize cross-sectional analysis between Incubation Centre, provincial venture capitalists, and coordinating startup.

EDUCATION AND TRAINING

2022 – CURRENT
MASTER OF SCIENCE (M.SC.) IN INFORMATIK (VISUAL COMPUTING) Technische Universität Dresden

Research Project: Integrating **financial** data with natural language processing (**NLP**) techniques for **alpha** strategy development in quantitative finance, demonstrating expertise in feature engineering, sentiment analysis, event detection, and named entity recognition.

Relevant Coursework: Scalable Data Engineering, Machine Learning, Financial Technology, Data Visualization, Computer Graphics, Software Engineering, Bioinformatics, High-Performance Computing, Scientific Programming, Data Analytics

ADDITIONAL INFORMATION

EXTRACURRICULAR ACTIVITIES

11/2022 – CURRENT
Team Leader oGX | Deutsches Komitee der AIESEC e.V.

- Currently leading a team of **4 members** for the **AIESEC Global Exchange** program and spearheading initiatives aligned with multiple United Nations SDGs to drive positive impact on a global scale.
- Supervising the area's information management, IR cooperation, and consumer support at all stages of the processes.

2017 – 2019
Innovation Lead | Team Urban-GIKI

Acted as a technical liaison for overseeing the developmental task of the entrant vehicle (for the Urban Gasoline stream) in preparation for the **Shell Eco-marathon Asia (** secured *7th* position).
Developed a competition-grade concept vehicle with a modular chassis and electronic fuel injection system which reduced the overall weight of the vehicle and optimized fuel consumption with a focus on improved mileage.

2016 – 2019
Executive Committee | GSS GIKI Chapter

Oversaw supporting activities regarding various on-campus events including GIK Cup, Winter Games, and All Pak Sports Festivals. I also serve as an event-coordinating **Sports Captain**.
My ongoing efforts to conduct class-to-class drives and rallying with students of my department to partake in the Institution-wide GIKI Sports Cup led to a **25%** increase in sports trials participation and eventually resulted in our department bagging **three** event medals (an improvement over the previous years' average of 1 medal for a given iteration of the Cup).