Ahmad M. Belbeisi

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Education

Technische Universität München (TUM), Munich, Germany 05/2021–Present
M.Sc. in Computational Science and Engineering

Technische Universität München (TUM), Munich, Germany 11/2020–Present
M.Sc. in Civil engineering

The University of Edinburgh, Edinburgh, UK 09/2014–08/2019
BEng (Hons) in Civil Engineering GPA: 3.3/4.0

WORK EXPERIENCE AND INTERNSHIPS

BMW Group - Entwicklung Antrieb (Drive Development) Munich, Germany
Software Internship / Advanced Development Transmission and Power train Simulation 03/2021–Present

- Developing an efficient algorithm for defining sampled cylinders that approximate an object defined by an STL file
- Implementing an algorithm to identify the significant edges in the cross-section area (orthogonal to a specified axis-direction
- Integration of Cylinder-based approximation of 3D-Objects algorithm into automatized Transmission synthesis Software

TE Connectivity - Energy and Utilities Ottobrunn, Germany
Working Student / Digital Factory 01/2021–Present

- Developing, analyzing and managing digital internet of things (IOT) solutions for Extrusion, Beaming, Expanding, Supply Chain and Logistics
- Implementing automatic data management systems that read/write-into standard database architectures (SQL)
- Automation of machine Ramp-up.

The University of Edinburgh Edinburgh , UK
University Research Assistant / Civil Engineering Department 06/2018–07/2019

- Established communication and aquired data from Amey, Arup, and Transport of Scotland
- Established communication and collaboration with several University of Edinburgh departments, specifically, the School of Engineering, the School of GeoSciences, as well as the Edinburgh Compute and Data Facility (ECDF), who enabled us to use Eddie and Terra-Correlator for data processing.
- Processed data from the Forth Road Bridge located in South Queensferry, Edinburgh, Scotland utilizing statistical models, analysis, and machine learning techniques.

Edinburgh University Hyperloop Society (HYPED) Edinburgh, UK
Student Member / Research Team 09/2016–08/2017

- Performed a conceptual feasibility of the Hyperloop vehicle from Edinburgh to London

Edinburgh University Formula Student Society Edinburgh, UK
Student Member / Engine Team 09/2015–08/2016

- Dismantled engine and designed baffled oil sump

TECHNICAL SKILLS

- **Engineering:** Computational Fluid Dynamics in Fire Engineering, Structural Analysis, Finite Element Method
- **Computation:** Scientific Computing, Modeling, Applied Mathematics
- **Data Science:** Uncertainty Quantification, Stochastic Inference, Statistical Learning, Data fitting
- **Programming:** MATLAB, R, C++, Python
- **Languages:** English **C2** , German **A2.2** , Arabic **Native**

HONORS AND AWARDS

- Prestigious Honors degree in Computational Engineering by the Elite Network of Bavaria 05/2021–Present
- Oskar von Miller Scholarship 12/2020–Present
- TRADA Student Design Competition - CO2nnect Finalist 2017
- University of Brighton Academic Excellence scholarship for Best Performing Student 2014

LEADERSHIP AND PROFESSIONAL DEVELOPMENT

Oskar Von Miller Forum

Student Representative & Corona Crisis Management Lead 03/2021–Present

- Leading the crises management team to ensure the safety and well being of scholarship holder
- Providing peer coaching to help fellow students stay motivated and manage mental health issues throughout the corona crises
- Managing contact tracing list

Oskar Von Miller Forum

System Administrator of Real-Time Video Translation / Advisor: Prof. Werner Lang 01/2021–Present

- Proposed and developed the real-time media translation project for Forum
- Managing the Google cloud service for the media translation
- Organizing a seminar series to provide the forum with machine learning prospective on real-time data analysis

ACADEMIC RESEARCH AND THESES

Bachelor Thesis:

Structural Health Monitoring with Machine Learning – Big Data Forecasting/ **Advisor:** Prof Michael C Forde

- Developed an anomaly detection algorithm that is derived from Long Short Term Memory Networks based Autoencoder (LSTM Autoencoder)
- Performed novelty detection on the extracted anomalies (damage-sensitive features) for The Forth Road Bridge in Scotland

Hobbies

- Hiking (Scottish Highlands, Tianmen mountain), Electronics, Biking, Amateur radio, Cooking