Sebastian Ghafafian

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Summary

Data scientist and mechanical engineer with four years of experience at the intersection of industry and academia. Creative problem solver with an eye for detail. Collaborative and fast learner able to tackle new challenges with a positive attitude.

Experience

Structural Engineer for Composite Materials
TPI Composites Germany GmbH
01/2021 – 08/2023   📍Berlin, Germany

- Design and execution of large-scale experimental composite sandwich testing using project and equipment management skills
- Development, deployment and code maintenance via Git of 3D tool for visualization of structural analyses in Python
- Effective communication with partners from research institutions throughout Europe within the "Reliablade" project
- Ownership of project-oriented Python packages for composite stiffness and failure analyses

Research Associate
Federal Institute for Materials Research and Testing (BAM)
11/2019 – 12/2020   📍Berlin, Germany

- Statistical safety and reliability assessment of composite overwrapped pressure vessels
- Improvement of pressure vessel regulations for Hydrogen and Fuel Cell Vehicles within the European research project "TAHYA" using Monte-Carlo Simulations (MCS)
- Improved computational efficiency of MCS in Matlab by over 200%

Intern for Composite Materials and Manufacturing
Institute for the Research and Development of Sports Equipment (FES)
10/2016 – 09/2018   📍Berlin, Germany

- Creation of precise manufacturing specifications and their communication to directors and manufacturing technicians
- Manufacturing and feasibility study with novel production techniques for composite materials

Teaching Assistant
Technical University Berlin
10/2016 – 09/2018   📍Berlin, Germany

- Focus on presenting complex subject matters to different audiences for five different courses

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Skills   Numpy   Scikit-Learn   Neural Networks with PyTorch   Pandas   Webscraping with Beautiful Soup   SQL   Dashboards with Dash   Plotly   Seaborn   Principal Component Analysis   Git

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Education

MicroMaster in Statistics and Data Science
Massachusetts Institute of Technology (MITx via edX)
05/2022 – 10/2023

- Built strong foundation in statistics and probabilistic
- In-depth study and application of unsupervised and supervised learning algorithms

M.Sc. Mechanical Engineering
GPA 3.8 / 4.0
Technical University of Berlin (TUB)
10/2018 – 08/2019

- Master's Thesis research: Probabilistic influence on material properties of fiber reinforced plastics

B.Sc. Mechanical Engineering
GPA 3.2 / 4.0
Technical University of Berlin (TUB)
10/2013 – 05/2018

Languages

Language	Level	
German	Native	●●●●●
English	Proficient	●●●●◐
Armenian	Beginner	●◐○○○
French	Beginner	●○○○○

Involvement & Certifications

🚗 **FaSTUBe (TUB Formula Student Racing Team)**
Head of Fiber Reinforced Plastics Manufacturing Team

🔍 **Quality Engineer – Green Belt**
Applied Data Science for Quality and Reliability Engineering

🗄 **IBM Data Science Professional Certificate**
Hands-on skills of Data Science methodology including Data Wrangling, Visualization, Machine Learning and SQL