

Zhoubin Maneshi



CONTACT

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PROFILE

I am an enthusiastic applied physicist with 7 years of experience in scientific project management, computational modeling, and programming. I am fast learner, hardworking, and team player. I strive to excel in challenging projects.

JOB HISTORY

Jan 2020 – Dec 2023

Customer Service Business Analyst

Chefly (Ltd), London, UK

- Business subject matter expert of customer interaction projects and tools
- Reporting for customer services to improve service levels
- Supporting customer service experience including the look and feel of interaction tools
- Department process improvement, delivering strategic initiatives and improve customer service systems, tools, and interfaces
- Coordinating issue resolution with vendors and/or cross-functional teams
- Providing timely and thorough communication regarding issue status/resolution with end-users

Nov 2019 – Dec 2019

Freelancer

- Airbus Ship Detection Challenge
Built a model to detect ships in satellite images by leveraging a sophisticated object-recognition algorithm and implementation using "scipy" and "scikit-image" packages in Python. The outcome improved the speed of detection by 12% while preserving the accuracy.
- Geometric Feature Analysis
Developed a Python script for geometric feature analysis of 3D objects using finite element voxelization which improved the accuracy of finding the minimum thickness of 3 objects and helped the accuracy of cut by 15% in a high-precision laser cut industry project.
- Numerical Simulation of Nonlinear Dynamical Systems
Developed a handful of scripts in MATLAB and Python to simulate and visualize some intricate dynamical systems. These systems exhibit fractal structures and macro-scale properties such as scale invariance and low-dimensionality.

Apr 2019 – Oct 2019

Test Engineer

Anvo-Systems Dresden (GmbH), Dresden, Germany

- Performed sequential testing of non-volatile memory chips during the qualification process
- Worked with the "Test Automation Software" written in C++ and performed various tasks such as implementing control parameters related to the digital logic, monitoring the test process, and signal processing post measurement
- Developed Python scripts for statistical analysis to reach the target efficiency during the manufacturing process

Aug 2018 – Mar 2019

Scientific Assistant

Institute of Environmental Physics (IUP), Heidelberg University, Germany

- Collaborated on the current bubble clouds formation studies
- Proposed a new mathematical model for the exchange of fluids between ocean and atmosphere

Oct 2017 – Jul 2018

Statistical Data Analyst

European Economic Research Center (ZEW) Mannheim, Germany

- Collaborated with a team of statisticians to study business characteristic models
- Performed time-series analysis and statistical prediction of market fluctuation, risk optimization, and strategic planning
- Developed SQL scripts for communicating with the database network drive
- Learned the essential skills needed in data science
- Analyzed well-known models in mathematical finance and developed a novel idea for improving a time-series analysis

Apr 2017 – Sep 2017

Contract Programmer

Department of Neurobiology, Heidelberg University, Germany

- Collaborated with a research group at the department of neurobiology
- Performed numerical analysis for a novel chemical model characterizing post-stimulus CNS response
- Learned about the exciting field of neuroscience and proposed a numerical solution which models intricate neurobiological chemical reactions

Apr 2016 – Apr 2017

Teaching Assistant

Department of Physics, Heidelberg University, Germany

- Conducted tutorial classes and revised term papers for M.Sc. students at the department of physics and astronomy for the summer course “Advanced Statistical Mechanics” and winter course “Nonlinear Dynamics”

Apr 2016 – Apr 2017

Contract Programmer

Department of Biology, Heidelberg University, Germany

- Assisted a team of molecular biochemists for determining the role of an enzyme in gene sequencing
- Developed several scripts in MATLAB featuring and implementing the genetic algorithm toolbox

Feb 2015 – Aug 2015

Scientific Assistant

Max Planck Institute for Medical Research (MPI), Heidelberg, Germany

- Worked with the software “Computer-aided Neuronal Tracing” and developed scripts in MATLAB for 3D image processing capable of multi-layer noise filtering, sagittal image stacking, and querying the processed images to database network drive for the use of medical researchers

EDUCATION

Apr 2017

M.Sc. in Physics

Department of Physics, Heidelberg University, Germany

Thesis: A Case Study of the Dynamics of Turing Pattern Formation via the Activator-inhibitor Reaction-diffusion Systems

Feb 2012

B.Sc. in Physics

Department of Physics, Shiraz University, Iran

Thesis: Noise-induced Phase Synchronization in Complex Neural Networks: A Computational Approach with MATLAB

SKILLS

Operating Systems: Microsoft Windows, Mac OS, Linux, Android, iOS

Software: \LaTeX , Microsoft Office (Word, Excel, PowerPoint), Adobe InDesign and Illustrator

Coding and Data Analysis:

- C++: standard library, OOP, .Net, SQL and database management, system configuration, real-time computing
- Python: scientific computing modules (numpy, pandas, and matplotlib), data science and ML modules (scikit-learn, PySpark, and TensorFlow), web scraping with BS4 for parsing HTML and XML
- MATLAB: linear programming, signal and image processing, simulation of nonlinear dynamical systems, SIMULINK

Languages: Farsi (Native), English (C2), German (B1)

Misc: Founder of the YouTube channel “Example Forest” which focuses on hands-on math and physics problem-solving strategies. youtube.com/channel/exampleforest

**HONORS AND
AWARDS**

- Selected among top 10 undergraduate physics students across the country in the National Academic Physics Olympiad, July 2011, Tehran, Iran
- Ranked 12th among 8600 participants in the Nationwide Entrance Exam for the Master of Science in Physics and accepted at Sharif University of Technology, May 2011, Tehran, Iran
- Honorable Mention in the National Physics Olympiad, May 2006, Shiraz, Iran
- Ranked 2nd in the State Level Comprehensive Examination, March 2006, Shiraz, Iran
- Honorable Mention in the State Level Physics Laboratory Competition, December 2005, Shiraz, Iran

CERTIFICATES

Data Scientist with Python Full Track Course issued by DataCamp Institute, March 2024

The course material included comprehensive lessons on data manipulation and visualization, sampling, hypothesis testing, Regression models, and machine learning with Tree-based models

Machine Learning Scientist in Python Full Track Course issued by DataCamp Institute, Oct2024

The course covered Python programming skill set with toolboxes to perform supervised, unsupervised, and deep learning. It continued with more technical aspects of processing data for features, training the models, assessing performance, and tuning parameters for better performance.

TEST SCORES

TOEFL iBT taken in July 2015 (105/120) with the following sub-scores:

Reading: 27/30 Listening: 26/30 Speaking: 24/30 Writing: 28/30

GRE Physics Subject Test taken in September 2015 (960/990)