

Saeed Parvar Ph.D.

Holder of EU Passport

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Experienced Quantitative Developer with over a decade of expertise in analyzing large datasets and visualization. Hold a Ph.D. in Mechanical Engineering, specializing in the application of advanced statistical techniques, including machine learning, to tackle 15+ engineering challenges. Proficient in algorithm development and programming languages such as Python, MATLAB, Fortran, and C++. Possess strong management and communication skills, backed by over five years of experience in sales management, business strategy, and employee training.

Skills and achievements

Finance	<ul style="list-style-type: none">• Proficient in measuring risk and return, algorithmic trading, and finance modeling.• Skilled in portfolio management, securities diversification, and optimization techniques.• Experienced in price modeling, multivariate regression, and Monte Carlo simulations using Python, API, and AWS.
Quantitative & Statistical Analysis	<ul style="list-style-type: none">• Conducted comprehensive quantitative and statistical analyses on large datasets using Python and MATLAB.• Proficient with R, SQL, and PowerBi for data manipulation and analysis.• Produced data visualizations, including plots and animations, to communicate insights effectively.• Created detailed technical reports based on thorough data analysis.
Programming & Algorithm Development	<ul style="list-style-type: none">• Developed advanced numerical algorithms in Python (Numpy, Pandas, Matplotlib, TensorFlow, Keras, PyTorch, Scikit-Learn), Fortran, and C++ for simulating complex engineering problems.• Optimized HPC MPI code using hybrid MPI/OpenMP model and GPU technologies (Nvidia CUDA, OpenACC, AMD HIP).• Utilized Git and GitHub for version control and collaboration.
Data Analysis & Machine Learning	<ul style="list-style-type: none">• Applied machine learning tools (PCA, FFT, Regression, Classification, Neural Network, Deep Learning) for complex data analysis.• Validated statistical models through extensive testing.• Managed and transferred large volumes of data across diverse HPC systems for multiple projects.• Optimized data pipelines and conducted in-depth analyses for streamlined processing.
Communications	<ul style="list-style-type: none">• Secured research grants through effective proposal writing, including the Euro High-Performance Computing (HPC) Regular Access Grant, equivalent to a 1 million euros budget.• Authored numerous technical reports on renewable energy systems, assessing their potential for energy generation.
Management	<ul style="list-style-type: none">• Successfully supervised and led engineering teams in simulation tasks and algorithm development, resulting in notable achievements such as winning the Best Publication Award at ISME 2015.
Problem-Solving	<ul style="list-style-type: none">• Proficient in identifying technical solutions and optimizing simulation tools for enhanced efficiency.• Proposed analytical solutions for complex engineering problems, resulting in publications in prestigious journals.
Team-oriented	<ul style="list-style-type: none">• Collaborated with international teams on multiple projects, demonstrating strong team-oriented skills.
Strategic Planning & Sales Management	<ul style="list-style-type: none">• Led monthly financial management, product supply chain, and stock orders.• Assigned tasks to sales representatives and mentored new employees, improving sales productivity.

Employment

2021-2023	Senior Simulation Engineer Royal institute of technology (KTH) Stockholm, Sweden. <ul style="list-style-type: none">Directed the development of sophisticated algorithms for simulation codes, optimizing computational performance and fidelity.Provided guidance and supervision to a team of engineers, fostering collaboration and excellence in simulation tasks and algorithm development.Developed innovative data collection methodologies and applied advanced Machine Learning tools to analyze intricate flow patterns, resulting in the creation of a robust modeling framework.Led the deployment and validation efforts of the model, ensuring its accuracy and reliability in real-world applications.Conducted comprehensive qualitative, quantitative, and statistical analyses on extensive simulation data sets, yielding actionable insights for scientific advancements.
2020-2021	R&D Engineer Institute of Science and Innovation in Mechanical and Industrial Engineering (INEGI) Porto, Portugal. <ul style="list-style-type: none">Utilized diverse computational fluid dynamics packages to extract and analyze data, contributing to the development of advanced models for fluid dynamics.Engineered technical solutions and enhanced simulation methodologies, resulting in improved research outcomes and efficiency.Produced comprehensive data visualizations and conducted thorough analyses to support decision-making processes.
2018-2019	Visiting and consultant Engineer The Federal University of Rio de Janeiro (UFRJ) Rio de Janeiro Brazil. <ul style="list-style-type: none">Conducted simulations and analyzed data to develop a systematic database and proposed innovative models for data interpretation.Developed code to streamline database analysis, improving efficiency and accuracy in data processing.
2017-2020	Research fellow University of Porto (FEUP) Porto, Portugal. <ul style="list-style-type: none">Designed and implemented algorithms for computational software, enabling simulations on High-Performance Computing clusters.Conducted research on renewable energy sources, contributing to the advancement of sustainable energy technologies

Qualifications

2021	Ph.D. in Mechanical Engineering , University of Porto, Portugal. Full fund Ph.D. scholarship and Graduated with GPA (A).
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Certificates

2024	<ul style="list-style-type: none">Cryptocurrency Algorithmic Trading with Python and Binance.Algorithmic Trading and Finance Models with Python, R, & Stata Essential Training.Python for Finance: Investment Fundamentals & Data Analytics.Project Management Foundations.
2023	<ul style="list-style-type: none">Machine Learning A-Z: AI, Python & R + ChatGPT.

<https://www.linkedin.com/in/saeed-parvar/details/certifications/>

Publication

<https://scholar.google.com/citations?user=Te8VKkEAAAAJ&hl=en>