

TRI DUNG (DUSTIN) HUYNH

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Summary

Highly skilled Data Scientist with extensive experience in leveraging data analytics, machine learning, and optimization techniques across diverse sectors, including energy, transportation, finance, and manufacturing. Proven ability to design and implement scalable models to optimize fleet management, energy consumption, and infrastructure usage on cloud infrastructure. Expertise in handling large datasets, developing predictive models, and utilizing geospatial data for strategic decision-making. Strong technical acumen combined with a passion for sustainable energy solutions.

For my next role, I am eager to apply my expertise in optimization, deep learning, and the energy and transportation sectors to develop scalable, high-efficiency applications that enhance performance and drive innovation. I aim to leverage my skills to create solutions that optimize operational processes, reduce costs, and contribute to sustainable advancements in the industry.

Skills

- **Programming & Cloud:** Python, R, Flask, SQL, Hadoop, AWS, Azure, Databricks, C#, Java, Scikit-learn, Keras, TensorFlow, PyTorch
- **Generative AI:** Prompt Engineering, Bedrock, RAG, Langchain
- **Mathematical Optimization:** Mixed-Integer Programming (MIP), Dynamic Programming, Location Demand problem
- **Machine Learning:** Reinforcement Learning in Combinatorial Optimization, Deep Learning (Advanced), Deep Reinforcement Learning, Transformers, LSTMs, Support Vector Machines, LLM, Gradient Boosting
- **Visualization:** Tableau, Power BI, Matplotlib, Seaborn
- **Others:** Statistical modeling, Data Analysis, Data structures, Data modeling, Predictive Analysis and Forecasting, Empirical Productivity Analysis, Operations Optimization, Agile, SCRUM

Experience

Data Scientist - Energy and Transportation ElectroTempo, Inc *Arlington, VA, USA* **11/2023 - Current**

- **Product owner and Lead Architect:** Led a cross-functional team of software engineers in developing and deploying an operational charging model for port terminals on AWS, **reducing electrification costs by 57% and saving \$100M+ for customers.**
- Designed and implemented a scalable AWS architecture, enabling complex optimization problems to be solved **20 times faster** than the original method.
- Designed and implemented a truck assignment optimization model for electric fleet operations, utilizing dynamic programming to enhance fleet efficiency
- Develop simulated light and heavy-duty vehicle charging demand based on transportation patterns
- Analyzed geospatial data to extract and model transportation patterns, driving accurate demand forecasting.
- Tech Stack: AWS (Lambda, step function, S3, EC2, SNS), python, Postgres, Mixed-Integer Programming, Dynamic Programming

Data Analyst for FBA Amazon PERX LLC *VA, USA* **01/2023 - 11/2023**

- Analyze Amazon selling data analysis to strategically source potential products, with a specific focus on **resolving logistical shortages and addressing areas of reasonable demand**, offering a wide range of products (more than 200 products) and providing an exceptional buying experience to customers
- Establish and optimize a streamlined workflow for an international team, facilitating seamless collaboration in their daily workload using Lark base technology

Infineon Technologies AG, The biggest German semiconductor company with 50,000 employees

Data Scientist - Mergers & Acquisitions and Corporate Strategy *Munich, Germany* **03/2022 - 08/2022**

- Implemented a cutting-edge **data pipeline for the Competitive Intelligence platform** and successfully integrated the S&P Capital IQ database into Infineon's robust big data infrastructure, enabling seamless access for stakeholders to internal and external semiconductor strategy analyses in real-time
- Proficiently manage and enhance industry databases and competitive analysis, encompassing vigilant tracking of M&A activity and benchmarking initiatives
- Spearhead the automation of preprocessing procedures and establishment of a comprehensive financial analysis database for quarterly strategy reports, achieving a remarkable **400% increase in efficiency**
- Tech Stack: Python, SQL, Tableau, Data Lake, S&P Global Market Intelligence API

Data Analytics and Reporting for Strategic Planning *Munich, Germany* **09/2021 - 02/2022**

- Developed automation software for exporting Analysis Dashboards, enabling data processing and analysis on the Tableau server in **just 8 minutes** per task, a significant improvement from the **previous 300 minutes** per task for each team member
- Designed and implemented optimized models to automate planning processes, resulting in a remarkable **200% increase** in team efficiency by controlling the relationship of demands, capacities, resources, and production routes of multinational production factories

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- Tech Stack: R, Hadoop, SQL, Google's OR-Tools, Python, Tableau, Data Lake

Founder

PERX OÜ

Estonia 01/2019 - 12/2020

- Cooperate with SMA Solar Technology, Germany to develop the solar power market in Vietnam
- Facilitate technology transfer and provide technical training to engineers on the installation, operation, and maintenance of SMA's advanced solar power systems

ALT Academy Research Consulting Group, Vietnam

Sales Manager

Marketing Manager and Senior Consultant

Ho Chi Minh City, Vietnam 05/2014 - 03/2015

Ho Chi Minh City, Vietnam 01/2013 - 05/2014

Education

Master of Science - Operations Research and Business Analytics – Ranked 1st of the program (Dean's List)

Otto-von-Guericke University Magdeburg, Germany

- Focus: Machine Learning and Data Science in Finance and Supply Chain Management

Master of Science - Economic Behaviour and Governance

University of Kassel, Germany

- The study of psychology that analyzes the decisions people make and why irrational choices are chosen

Bachelor of Arts - Banking and Finance

Foreign Trade University, Vietnam

- Focus: International Finance

Bachelor of Arts - Business Administration

Foreign Trade University, Vietnam

Award

- Ranked 1st in Master of Science: focus on Machine Learning and Data Science (07/2023)
- Won 2nd award in the Mathematics regional competition (Vietnam, 2008)

Certifications

- Data Scientist Professional with Python - DataCamp - 116 hours
- Machine Learning Scientist - DataCamp - 93 hours
- AWS Solution Architect - Udemy - 30 hours

Other Projects

The crew scheduling system for public transportation service providers

Otto-von-Guericke University Magdeburg

<https://github.com/HAKO411/crew-scheduling-problems>

- Developed a mixed-integer column generation optimization model to schedule **1000s trips** for bus drivers based on limited driving time, break time, driving and non-driving time constraints
- Tech Stack: Google's OR-Tools library for Optimization model, Python, VS code
- Achievement: Successfully implemented model to optimize a real-world transportation problem

Deep learning for predicting short-term demand in bike sharing systems

Otto-von-Guericke University Magdeburg

<https://github.com/HAKO411/Deep-Learning-for-Short-term-bike-sharing-demand-prediction>

- Built Deep Learning models: LSTM and CNN-LSTM prediction model for short-term demand at each station for the next two hours in bike sharing systems using Helsinki Region Transport data and weather features
- **12M entries, 14 attributes** pickup data, and **40.000 entries, 18 attributes** weather data
- Tech Stack: Google's OR-Tools library for Optimization model, Python, VS code
- Achievement: Discover characteristics of demand stations, tune models for **MAE=1.3, R-squared >0.85**

Stock Prediction Model and Portfolio Optimization for Investment Portfolio

Otto-von-Guericke University

Magdeburg

<https://github.com/HAKO411/Portfolio-Optimization>

- Build asset's price prediction model with ARIMA and Deep learning - Stacked LSTM model and achieved 90% accuracy
- Build an optimized portfolio with Modern Portfolio Theories
- Tech Stack: TensorFlow Keras, SciPy, seaborn, Python, Jupyter Notebook