Filippos Dimitrios Ktistakis

Grønjordsvej 1, 2300 København S, Denmark · +45 71688311 · phktistakis@gmail.com
GitHub: github.com/philipposk · Portfolio: 6x7.gr

Cover – Machine Learning Engineer

Dear Frederik and team,

My name is Filippos Dimitrios Ktistakis, and I recently completed my MSc in Computational Physics at the University of Copenhagen, where I worked with data analysis, optimization and machine learning on practical projects. Over the past years I have used Python for data science, model development and full stack product work, and I would like to apply that experience in this Machine Learning Engineer role at DK Company.

In my MSc thesis I developed a misalignment detection tool for the McStas neutron scattering simulation package using optimization and machine learning. This required building data pipelines, cleaning and transforming simulation data, training and validating models and documenting the workflow so others could reuse it. As a Data Analyst at the University of the Aegean I processed environmental and microbiological data from the Gulf of Kalloni, focusing on data quality, reproducible Python workflows and clear reporting to domain experts.

Alongside my academic work I have built several applications end to end, including a crypto time series prediction app and commercial products such as a salon marketplace and a booking and management app with AI supported features. These projects gave me experience in Python ML frameworks, feature design and model evaluation, and also in software engineering topics such as REST APIs, backend services, authentication, CI and CD style Git workflows and deployment using tools like Node.js, Docker and modern web hosting platforms.

I would like to work on forecasting and pricing models that affect real sales, inventory and supply chain decisions across your brands and to learn your Fabric, dbt and Databricks platform as part of that.

I have not worked directly with Azure yet, but I have been using Cursor with MCP based tools and agents, building retrieval augmented generation and agentic workflows, and I am currently experimenting with local LLMs and n8n for automated data and integration flows. I am motivated by roles where models connect to concrete decisions, and my previous projects have involved turning scientific and environmental data into tools that can be used in practice. I would like to bring the same approach to ML work in fashion, retail and e commerce, and I see DK Company's focus on a modern data platform and ML based forecasting and decision support as a good fit for this.

Thank you for considering my application. I would be happy to discuss how my experience with Python, machine learning and building products can support the work of the data and analytics team at DK Company.

Best regards,
Filippos Dimitrios Ktistakis

CV – Machine Learning Engineer

Profile
Computational physicist and machine learning engineer with experience in Python based data analysis, modeling and building production ready applications across web and mobile. Comfortable taking data from raw sources to validated models and documented outputs, and used to working with time series, optimization and statistical methods. Also experienced in full stack development, Git based workflows and deploying solutions that are used in practice.

Core skills

- **Machine learning and data science:** Python, NumPy, SciPy, Pandas, Matplotlib, TensorFlow, Keras, PyTorch, scikit learn, time series forecasting, regression and classification, anomaly and misalignment detection, statistical analysis and hypothesis testing.

- **Data pipelines and MLOps mindset:** Structuring analysis as pipelines that move from raw data to cleaned features, models and evaluated outputs, with attention to data quality, documentation and reproducibility.

- **Backend and APIs:** Node.js, Express and NestJS, RESTful APIs, authentication and authorization with JWT and Supabase Auth, integration of AI services such as OpenAI and Groq, and database backed services with PostgreSQL and MongoDB.

- **Databases and data modeling:** PostgreSQL with Prisma, MongoDB with Mongoose, Supabase as a Postgres based backend, including schema design and queries for analytics and product features.

- **Development tools:** Git and GitHub for version control, Docker for containerization, Vercel and GitHub Pages for deployment, automated testing with Jest, Vitest and Playwright, linting and formatting with ESLint and Prettier.

- **Frontend and product work:** React, Next.js, TypeScript and Tailwind CSS for web, Swift and SwiftUI for iOS, Kotlin and Android SDK for Android, and Unity with C# for interactive and game like applications that consume data and ML outputs.

Experience

Data Analyst, University of the Aegean
Lésvos, Greece · Oct 2022 – Aug 2023

- Processed environmental and microbiological data from the Gulf of Kalloni as part of a health study, focusing on cleaning, consistency checks and structured analysis workflows.

- Used Python and spreadsheet tools to transform raw measurements into usable datasets and reports for researchers and decision makers.

- • Coordinated with scientists to clarify data definitions and ensure that derived metrics and visualizations matched the goals of the study.

Co Founder and Treasurer, Mediterranean Institute for Education S.C.C.
Greece · 2020 – 2024

- • Helped run a non profit focused on scientific, technological and cultural education, including planning seminars, workshops and events.

- • Managed budgets and reporting, gaining experience with structured data tracking and documentation.

Teacher, Museum of Experiments (Mouseio Peiramaton)
Athens, Greece · 2015 – 2018

- • Taught laboratory experiments in physics, chemistry and biology to elementary school students in a private educational setting.

- • Developed clear explanations of scientific concepts, which transfers to explaining data and model results to non experts.

Selected projects

Misalignment Detection Tool for McStas (MSc thesis) – University of Copenhagen

- • Developed a misalignment detection tool using optimization and machine learning for neutron scattering simulations in McStas.

- • Built data pipelines to generate, process and analyze simulation output, and evaluated models systematically.

Crypto Time Series Prediction App

- • Built a prediction system for cryptocurrency prices using Python ML libraries for feature design and forecasting models.

- • Implemented ingestion from external APIs, preprocessing, training and evaluation in a structured workflow.

Salon Marketplace and Booking App with AI Features

- • Developed a salon marketplace and booking and management app that includes AI supported features, from backend to frontend.

- • Implemented authentication, scheduling and integrations with AI APIs, ensuring reliable data flows between components.

Diagnostic and benchmarking tools for scientific projects

- • Built diagnostic and benchmarking tools using simulations, data pipelines and optimization for scientific instruments.

- • Applied machine learning and statistical methods to detect issues and

improve reliability in experimental setups.

Education

MSc in Computational Physics
University of Copenhagen, Denmark · 2021 – 2024

- • Thesis: Development of a Misalignment Detection Tool for the McStas Neutron Scattering Simulation Package Using Optimization and Machine Learning Approaches.

- • Relevant courses: Applied Machine Learning, Applied Statistics, Advanced Methods in Applied Statistics, High Performance Parallel Computing, Scientific Computing, Inverse Problems.

BSc in Physics
National and Kapodistrian University of Athens, Greece · 2017 – 2021

- • Specialization in Telecommunications, Electronics, Computer Science and Automated Systems.

- • Thesis: Machine Learning on Quantum Computers.

Languages

- • Greek, native.

- • English, proficient.

- • Danish, module 3.

- • French, B1.