IOANNIS KARKANIAS

CONTACT

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in Social Profile

SKILLS

Data Analytics - Machine Learning

- Python
  - Numpy, Pandas
  - Scikit-Learn, Matplotlib, scipy
  - Keras, Tensorflow, PySpark, PyTorch
  - CERN ROOT
- R
- SQL
- IBM Cognos Analytics

Web and software development

- React-JS, NodeJS
- HTML, CSS (Tailwind)
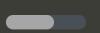- C++

Collaborative Tools

- Git
- Confluence
- draw.io
- PlantUML

LANGUAGES

- Greek
- English
- German

Machine Learning Scientist, Physics PhD

PROFESSIONAL PROFILE

Combining a theoretical and experimental background, I employ a physicist's approach in the world of data. Alongside my main expertise in designing and applying data analysis, statistical computation and visualization pipelines, my passions extend to web and software development.

WORK EXPERIENCE

Business Analyst (Arhs Developments Hellas)
Dec 2021 - Dec 2022

Freelance consultant for **large scale IT - Big Data** software development

- Consulting services to corporate stakeholders
- Data Modeling validation
- Project Requirement and Impact Analysis
- User Story creation and UML modeling

Doctorate (Physics Dept., Aristotle University of Thessaloniki)
Nov 2017 - Jun 2022

Scholarship-funded research exploring Machine Learning in statistical data analysis with collider data from **CERN LHC's ATLAS** experiment

- Adaptation of **Machine Learning** techniques in signal and background classification, synthetic data generation and hypothesis testing that led to strictest known limits to a family of theorised particle interactions
- Full data manipulation and computation pipeline implementation using **ROOT** and popular **Python** statistics and ML libraries

COURSES

Big Data Platforms (University of Helsinki)
Oct 2021

- Master's level course on technologies and implementation of large modern distributed systems
- Hands-on exercises using **PySpark** and **SQL**

Full Stack Open (University of Helsinki)
Aug 2021

- **React**-based course on full stack web development
- Step-by-step development and testing of single page apps, implementation of REST API and integration with no-SQL MongoDB database on the cloud

EDUCATION

Aristotle University of Thessaloniki (Greece 2018-2022)
  PhD in Experimental Particle Physics

Durham University (United Kingdom 2016-2017)
  Master's Degree in Theoretical Physics

Aristotle University of Thessaloniki (Greece 2011-2016)
  Bachelor's Degree in Physics