

# Vangelis Kourlitis PhD

Data Science | Technical Leadership | ex-CERN

## PROFILE

Data scientist with 10 years experience in technical projects and leadership positions at CERN, specialized in delivering scalable pipelines in big data analytics and AI/ML. Skilled leader with extensive experience building and mentoring teams, managing production projects and stakeholders, and authoring technical reports. Now seeking a business-oriented role to master new tooling and enhance data-driven decision-making in AI products.

## CONTACT

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## SKILLS

Leadership

Team building • Mentoring •  
Milestone alignment • Stakeholder  
management • Executive storytelling  
• JIRA

Programming

Python • SQL • C++ • Bash • Git

Data & Cloud

Apache Spark / Databricks • GCP •  
AWS • Governance/FAIR

## EDUCATION

### TECHNICAL UNIVERSITY OF MUNICH

Scientific Project Management  
2024 | Munich, DE

### UNIVERSITY OF SHEFFIELD

PhD in Physics  
2015 - 2019 | Sheffield, UK

### ARISTOTLE UNIVERSITY OF THESSALONIKI

B.Sc. in Physics  
2009 - 2015 | Thessaloniki, GR

## EXPERIENCE

### CERN & TECHNICAL UNIVERSITY OF MUNICH | Geneva, CH Analysis Model Group Coordinator

Oct 2023 - Dec 2024

- Led a global, 120-member cross-functional group, delivering production support for a data analysis platform serving more than 3,000 analysts.
- Partnered with senior stakeholders to define roadmap and success metrics for new features delivery, ensured adherence introducing policies to double development efforts while maintaining within budget.
- Rolled out streamlined and documented software configuration paradigm, reducing analysts onboarding time by over 95%.
- Reduced organizational data storage costs 3x by adopting a lightweight columnar data format along with observability solutions to proactively troubleshoot data-quality issues.
- Mentored 5 early-career developers, delivering innovative data analytics products on time and fostering professional growth.

### Data Scientist

Mar 2023 - Sept 2023

- Awarded €40k to modernize >100 TB data transformation tools with scalable array-based pipelines, achieving 4x faster analysis aligned with modern Pythonic data science standards.
- Built and deployed a novel Python-based hypothesis testing workflow with standardized templates and actionable metric visuals, improving UX and reducing time-to-first-analysis by >80%.

### ARGONNE NATIONAL LABORATORY | Chicago, US Data Scientist

Nov 2019 - Feb 2023

- Led a team of 7 in applying advanced analysis algorithms and deep learning (MLP, RNN) for complex data classification, increasing analysis coverage by 12%.
- Established FAIR principles for AI models governance and standardized metrics, allowing faster review cycles and enhanced transparency across projects.
- Developed an end-to-end CNN computer vision model, with multi-GPU training strategy in PyTorch and MLflow, to restore fast, low-accuracy sensor images and improve simulation software cost-efficiency by up to 20%.
- Stress-tested Google Cloud Platform's readiness and scalability for large-scale analysis workflows, minimizing TCO by optimizing egress.

### UNIVERSITY OF SHEFFIELD | Sheffield, UK Doctoral Researcher

Nov 2015 - Oct 2019

- Developed and maintained data-analysis software across the full development lifecycle, enabling high-throughput distributed computations on a 500k core computing grid.
- Authored the first technical report at CERN to open source a complete statistical model, setting a precedent for reinterpretation and transparency in the field.
- Taught Python programming, scientific computing and ML fundamentals to MSc students through hands-on lab sessions.