Ioannis Konstantelos

Engineering Leader

London, UK

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Enthusiastic and fast-learning technical leader with over 15 years of experience across startups, consulting, large corporations and academia. At my best when shaping engineering teams, driving product innovation, and delivering impact through scalable solutions.

💼 Employment

07/2021 – present
Principal Engineer

07/2018 – 06/2021
Lead Engineer

Flexciton

London, UK

Cutting-edge SaaS platform that integrates with and optimizes semiconductor fab operations in real-time. Mission-critical software deployed in over 15 fabs globally. Tech Stack: Python, Angular, PostgreSQL, Redis, Kafka, CPLEX, Azure, Kubernetes, Helm, Docker, Prometheus, Grafana, ELK, Tableau, GitLab CI/CD.

- Joined at Flexciton's inception and played a **pivotal role in scaling the company** from 2 to 50+ employees.
- Built and led a specialized optimization and backend engineering **team of 20**, directly line-managing up to 10 engineers and driving **talent acquisition**.
- **Hands-on** spearheaded the technical development of Flexciton's **4 core products** that are now fully deployed and operational.
- Introduced **best practices** to achieve **effective product iteration** and **delivery**: SDLC, cloud cost reduction, tech debt management, testing, benchmarking, CI/CD, MLOps.
- Shaped Flexciton's **strategic vision** by driving architecture design, owning roadmap development, and collaborating daily with the CTO.
- Enabled fabs to achieve **on-time target delivery** and up to **10% reduction in cycle times**, resulting in tens of millions of savings.

08/2015 – 06/2018
Research Fellow

10/2012 – 08/2015
Research Associate

Imperial College London

London, UK

Carried out world-class research on energy market and system modelling.

- Focus on **AI / ML**, optimisation, **big data**, Monte Carlo methods.
- State-of-the-art research: **over 55 peer-reviewed articles and over 2,300 citations**.
- Research work presented in **over 25 conferences globally**, including plenaries.
- Research Co-Investigator in **8 multi-million R&D projects**.
- **Long-lasting engagements with numerous high-profile partners** (*Ofgem, National Grid, Elexon, RTE, EdF, DG ENER, entso-e*) as an expert in energy economics and UK/EU markets and regulation.
- **Technical supervision** of 17 MSc projects, 6 PhD students and 2 postdocs.

10/2012 – 07/2021
Director

Ikonikon Ltd

London, UK

I founded Ikonikon to leverage my expertise in modelling the UK/EU energy sectors.

- Carried out over **15 industrial consulting projects** focusing on data-driven analysis and techno-economic modelling of energy systems.
- End-to-end responsible for the entire **value chain**: negotiating contracts, defining requirements, modelling, results analysis, and findings dissemination.

10/2007 – 10/2008
Project Engineer

Mott MacDonald

London, UK

High-impact work in a global engineering and management consultancy firm.

- **Led the multi-engineering design reports** for the upgrade of 8 London Underground substations for the London Olympics.
- Led initiative to extend the in-house traction power modelling platform (MATLAB and C++), **automating tasks and saving hundreds of consultant hours annually**.

06/2006 – 10/2006
Software Engineer

ARM

Cambridge, UK

Worked in the compiler team of the UK's most successful tech firm.

- **Automated high-throughput testing on large CPU farms** using C++ and Perl.
- Recognized as an **exceptional contributor** and **awarded MEng scholarship**.

🎓 Education

10/2008 – 10/2012
PhD in Energy Systems
Imperial College London

- Completed in the Control and Power research group under the supervision of Prof. Goran Strbac.
- Thesis title: "A Stochastic Optimization Framework for Anticipatory Transmission Investment".

10/2003 – 07/2007
MEng in Electrical and Electronic Engineering
Imperial College London

- Focus on software, machine learning and signal processing.
- Overall result: 76% (First Class Honours – among top 10 students)
- Thesis title: "Equalization of GSM data bursts using complex-valued recurrent neural networks"

✨ Skills

Programming	Python Flask SQL TypeScript React R C++ Bash
Data Science	scikit-learn NumPy Pandas Pyomo Gurobi CPLEX OR-Tools
AI	PyTorch TensorFlow langchain vector databases
DevOps & Cloud	Azure Kubernetes Docker Git Prometheus Grafana Tableau ELK
Languages	English (full proficiency), Greek (native), French (medium)

🎗 Honors and Awards

- Best Journal Paper Award, IEEE PES General Meeting, Orlando, 2023.
- Best Paper Award, Probabilistic Methods Applied to Power Systems, Beijing, 2016.
- Best Student Paper Award, IEEE PES General Meeting, Boston, 2016.
- Four-year PhD studentship from EPSRC SuperGen FlexNet, 2008.
- MEng Final Year sponsorship from ARM Ltd, 2006.
- Farnell InOne scholarship for best individual 1st year project at Imperial College, 2004.

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- linkedin.com/in/ikonstantelos
- scholar.google.com/citations?user=BUuMLugAAAAJ