Andreas PLENGE

Algo & Quant Engineer

Engineer with experience in stabilizing the energy grid. I combine a hybrid background in mathematics and software engineering to design scalable analytical tools and model complex systems. I have a strong foundation in dynamical systems, probability, and programming, and I am motivated by solving data-driven problems in performance-sensitive environments, particularly those involving uncertainty, forecasting, and optimization.

Contact Information

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LinkedIn/andreasplenge

Languages

- Danish — Native
- English — Fluent

Programming Languages

- Python & R
- NoSQL & SQL
- TypeScript & JavaScript
- DAX & M (Power Query)
- Java

Tools & Frameworks

- Power BI
- Excel
- Pandas, NumPy & TensorFlow
- Power Automate

Skills

- Algorithm Optimization
- Query Optimization
- Data Visualization
- Programming
- Problem-Solving

References are available upon request

Work Experience

Bodil Energi
August 2024 – Present

Tech Lead promoted from ML Engineer, June 2025

Designed and developed the core grid stabilization algorithm, orchestrating real-time coordination of household devices using scalable combinatorial methods and linear-complexity optimizations. Conducted code reviews and collaborated with the team to ensure robustness and maintainability.

Deployed the system across households, using consumption forecasts to bid in ancillary service markets and controlling devices based on live frequency monitoring, ensuring reliable and efficient stabilization of the electricity grid.
◇ Python, TypeScript, noSQL, Power BI, Pandas, Numpy, TensorFlow

KOMBIT
August 2022 – August 2024

IT Consultant promoted from Student BI Developer, March 2024

Designed dashboards for complex data visualization. Automated data workflows, data quality controls and administrative tasks, to enhance efficiency. Provided technical support, data analysis, and ad hoc problem-solving.
◇ Python, R, Power BI, Power Query, Excel, DAX

Education

MSc in **Software Design** — 2024

at IT Univeristy of Copenhagen

- Specialization in **machine learning**
- **Thesis:** Proposed a novel machine learning algorithm for the k-approximate nearest neighbors problem, applying a hierarchical structure to inverted file indexes using k-means clustering.

MSc in **Mathematics** — 2020

at University of Copenhagen

- Specialization in **dynamical systems**
- **Thesis:** unfinished

BSc in **Mathematics** — 2018

at University of Copenhagen

- Specialization in **mathematical finance**
- **Thesis:** Explored the connection between the heat equation and Brownian motion, combining advanced concepts in probability and differential equations.