Jonathan Hornewall, Ph. D. Student in Applied Mathematics

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PROFILE

- ***Ph. D. student in Applied Mathematics and Optimization*** enrolled at *École Polytechnique* and *École Des Ponts*

- Broad professional experience ranging from academic and industrical ***research departments*** to ***start-up environments.***

EDUCATION

Sep 2022 — May 2023	**Institut Polytechnique de Paris**	Paris

- Master Degree in Mathematical Optimization. Double degree arrangement with KTH.

Sep 2021 — Aug 2022	**École Polytechnique**	Paris

- ***First student from KTH in several years*** offered the opportunity to partake in exchange with the Cycle Ingénieur for several years due to strict academic and language requirements.

- ***All teaching was in French*** and I was ***moved up one year.***

2017 — Jun 2022	**KTH Royal Institute of Technology**	Stockholm

- Degree in ***Engineering Physics/Civilingenjör Teknisk Fysik***

- ***GPA 4.75/5.00,*** *close to the top of the class*

- ***STEM program with strictest admission requirements in Sweden.***

SELECTED PROFESSIONAL EXPERIENCE

Nov 2023 — Present	**Ph. D. Student, École Polytechnique and École Des Ponts**	Paris

- Supervisors: Stéphane Gaubert and Vincent Leclère

- Projects in the intersection of ***stochastic optimization***, ***stochastic analysis*** and ***Operations Research***

Apr 2023 — Sep 2023	**Research Intern , Electricité de France**	Paris

- Project focused on ***vehicle-to-grid optimization*** and ***smart grids.***

- ***Developed novel combinatorial algorithm***. The results are currently ***in the process of being published.***

Mar 2023 — May 2023	**Student researcher at CMAP**	Paris

- Worked with two other students to test and ***improve the performance of the BORG-algorithm*** for multi-objective optimization.

- Wrote a conference paper and presented it ***at the 2023 GECCO conference in Lisbon.***

Jun 2022 — Sep 2022	**Research Engineer and Software Developer , KTH/DCS**	Stockholm

- Was accepted for Digital Futures internship at KTH's DCS division.

- ***Developed a meta heuristic solver*** for a novel vehicle routing problem to simulate the behavior of multiple agents competing for charging infrastructure.

Oct 2020 — Oct 2020	**Statistical Modelling Project for CERN**	Stockholm

- ***Worked in a team to develop a novel statistical model*** for handling of data during ATLAS experiment

- Due to ***outperforming the prior model*** it isbeing developed further by other researchers.

Mar 2016 — May 2017	**Sales Team Leader and First Contact Responsible , Gigstr AB**	Stockholm

- ***Was in charge of all initial customer contact*** for a ***growing start-up***

SPECIAL SKILLS

Programming Languages:	Quantitative:
Python, Matlab, Julia, Amplide, Gurobi, CPLEX	Statistical Analysis, Matmematical Optimization, AI Frameworks

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LANGUAGES

English	C2	French	B1

EXTRA-CURRICULAR ACTIVITIES

- Earned the equivalent of a **black belt in Kung Fu when I was 13**, and was the youngest person in Sweden to do so in my style for several decades.

- **Helped lead Effective Altruism** as an **elected board member** at Stockholm University , where I took extra courses by the side of my main program.

- **Founded and lead an event organization group.** Rented venues, organizing parties for **hundreds of people,** making a profit from each event.

INTERESTS

I love literature, philosophy, alpine sports, hiking, and fitness. **Anything that forges strong memories.**

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