PIERRE GRAEF

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Strasbourg, FRANCE / Munich, GERMANY

Mathematical Engineering &
Data Science Graduate, 23 years old

SKILLS

- **Mathematics Engineering :** strong basis in statistics, probability, algebra
- **Python** : NumPy, pandas, scikit-learn, TensorFlow…
- **R :** tidyverse, cleaning and transforming data, project structure
- **SQL** : database conception and management
- **Data visualization** : skills using tools like Matplotlib and PowerBI
- **Matlab** : Machine learning algorithms for classification, regression, clustering
- **MS Office package :** Excel, Word, PowerPoint, OneNote

DATA SCIENCE PROJECTS

Trust Region Algorithm, Master First year
Explored trust region algorithms for **non-linear optimization**, implementing and **fine-tuning** various methods in **Python**.
Applied these techniques to optimize a complex financial portfolio, showcasing analytical and programming skills.

Actuarial Tool for Marine Reinsurance
Developed an **R-based tool** that automates the **acquisition, cleaning, and sorting** of data from public databases, such as UNCTAD. This tool applies **actuarial methodologies** to assess exposure to loss and analyze the impact of inflation on premiums.

LANGUAGES

- **French** (native)
- **English** (fluent)
- **Italian**
- **German**

HOBBIES & VOLUNTEERISM

2022 – 2024: Co-founder and treasurer of a humanitarian association, " Elsass Raiders "
Established an association to take part in Europ'Raid, a humanitarian rally, where we delivered school supplies to a remote orphanage in Eastern Europe.

Experience in fundraising, sponsor acquisition, and project presentation.

And above all, it was an extraordinary human adventure across 21 countries in Europe.

2010 – 2023: Handball Club Eckbolsheim
Player for 13 years at a regional excellence level,

Actively participating in the club's community activities such as distributing flyers, sales, and organizing events.

PROFESSIONAL EXPERIENCES

March to August 2024 : 6 Months internship as an Intern Actuary / Data Projects for Specialty Reinsurance Solutions
Munich Re, Munich, Germany

- Developed and implemented an actuarial tool for indexation using R Studio, encompassing analysis, structure, and coding
- Automated data acquisition and cleaning processes to streamline workflow
- Created comprehensive documentation for the tool and its code
- Gained valuable abroad experience working in a multinational company environment
- Enhanced proficiency in R and Excel, applying advanced techniques to real-world projects
- Developed in-depth knowledge of reinsurance, with a particular focus on Marine and Cargo sectors

Summer 2022 & 2023: Town hall reception agent
Town hall, Lingolsheim, France

- Providing valuable information and ensuring a high standard of service that contributed to a positive experience for all community members

EDUCATION

Aug 2023 – Jan 2024 : Master's Erasmus exchange
Mälardalen University, Västerås, Sweden

- Python in Financial Engineering: Processed and visualized financial data, integrated Python with Excel and the Web, applied numerical methods for finance
- Data Analysis, Clustering, and Classification: Worked with K-means, EM, DBSCAN, Naive Bayes, SVM, and LDA for data analysis
- Gained international experience in a multicultural environment
- Enhanced problem-solving skills and advanced data analysis techniques

2022 – 2024 : Master's Degree in Applied Mathematics "Mathematical Engineering and Data Science"
Faculté des sciences et techniques, University of Haute-Alsace, France

- Probability, statistics, optimization
- Matrix analysis, database conception
- Data analysis, business intelligence, reporting
- Python, R, SQL

2019 – 2022 : Double Bachelor's Degree in Mathematics & Quantitative Economics
Faculté des sciences économiques et sociales, University of Strasbourg, France

- Algebra, analysis, probability, statistics, optimization
- Finance, quantitative economics, econometrics
- Microeconomics, macroeconomics, accounting

REFERENCES

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