



# Manuel Capel

## Résumé

### Education

- 2000–2002 **Classes préparatoires**, *Preparatory classes to engineer schools*, Lyon, FR.  
2002–2005 **ENSAI**, *French National School of Statistics and Information Analysis*, Rennes, FR.  
2009–2010 **University Paris VI**, *Bachelor of Mathematics by distance learning*, Paris, FR.

### Experience

- apr. 2019–now **CTO - cofounder**, *Parcoor*, Zurich, CH / Lyon, FR.  
Implementing simple, secured and user-friendly AI solutions.
  - Business development
  - Design and implementation of novel ML models for detection of malwares, network attacks and anomalies
  - Development management (team of 6 developers) for embedded cybersecurity solutions combining hardware programming and machine learning
  - Building time series model for forecasting company revenues
  - Developed **CAST**, a stochastic micro-simulation model for predicting Covid-19 spread, featured in various French medias (Usine Nouvelle, Cadre et Dirigeants, Le Progrès...)
  - Building interactive dashboard for visualizing and analyzing revenues
- dec. 2019–aug. 2021 **Backend Engineer**, *Cleverttech*, New York, USA (remote).  
Maintaining and improving data pipeline for evaluating advertisement campaigns.
  - Designing and building end-to-end cloud-base NLP data processing pipeline from multiple sources
  - Building CI/CD pipeline for processing elements
  - Consolidated data inputs and improved data processing time by 4x
- aug. 2017–feb. 2019 **Data Scientist**, *Ringier AG*, Zurich, CH.  
Solving use cases and building production pipelines.
  - Building the whole data pipeline for disambiguating users among different platforms, Developing model for gender prediction, for bot detection
  - Developing recommender system for online articles
  - Developing models for comment filtering (NLP)
  - Visualisation and prediction of media content virality
- jun. 2017–jul. 2017 **Data Engineer**, *Everycs*, London, UK.  
Extraction, transformation and loading of product data
- apr. 2017–may. 2017 **Data Analyst**, *AccessWatch*, Berlin, DE.  
Developing machine learning methods for bot detection
- feb. 2017–mar. 2016 **Data Preparation Expert**, *Wealthport*, Zurich, CH.  
Processing data transformation pipeline

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🌐 [mancap314.github.io](https://mancap314.github.io) • **in** [manuel-capel-9a9b40134](https://github.com/manuel-capel-9a9b40134) • 🌐 [mancap314](https://mancap314.com)

- oct 2013–oct 2016 **Scientific Assistant**, *Zurich University for Applied Sciences*, Winterthur, CH.  
Worked on several projects related to data analysis and process design.
  - Developing ageing models for water pipes, for maintenance optimization of vessel hulls
  - Project definition with costumers and team, Redaction of scientific reports
- mar. 2013–aug. 2013 **Java Developer**, *Nextevolution*, Berlin, DE.  
Developed on templates and authentication system for a Document Management System
- dec. 2011–feb. 2013 **Developer**, *Medizinischer Fakultätentag*, Berlin, DE.  
Full-stack development.
  - Conception, modelization and development of a web application to collect and evaluate data from German medicine faculties
- oct. 2008–sep. 2011 **Main Officer**, *Federal Statistical Office of Germany*, Wiesbaden, DE.  
Assisting project management and development.
  - Guidance for the migration of an Content Management System
  - Implementation of parts of the project
- apr. 2005–sep. 2008 **Developer-Analyst**, *INSEE*, Aix-en-Provence, FR.  
Assisting project management and development.
  - Assisting project management and responsible for development, user training and assistance around the Content Management System
  - Referent for web accessibility

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## Languages

- English: Good proficiency
- German: Fluent
- French: Native
- Spanish: Intermediate proficiency

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## Machine Learning / Deep Learning skills

- Data Processing: Extraction, processing, formatting, persistence of data in various formats
- Modelling: Classification, Regression, Ensembling, measuring performance in Python and C
- Deep Learning: Keras, Tensorflow, PyTorch on different architectures, e.g. CNN or Recurrent
- Visualisation: matplotlib, seaborn, pyplot, plotly, ggplot (R)

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## Computer skills

- Programming: Python (advanced), C++, R, Java (intermediate), C (intermediate)
- (no)SQL: MySQL, PostgreSQL, MongoDB. Experienced in querying very large tables
- Cloud Computing: AWS, Google Cloud, Containerization (Docker, Kubernetes), data engineering, E2E ML-Ops

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## Miscellaneous

- [Novel algorithm](#) for fast computing of Fibonacci numbers.
- [Webapp](#) retrieving media trends from Google Trends and Twitter.
- Paper "Improving Supervised Classification with Density Ratio Encoding. Application to Human vs. Robot Classification", 2017.
- Python library *paracoord* for visualizing multi-dimensional data.

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## Interests

Table Tennis, Chess, Traveling

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