# Nicolas Forstner

## Personal information

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## Education

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| 2018-2022 | **University of York (Russel Group)**<br>*MEng (Hons) Computer Science with Artificial Intelligence*<br>• First class honors with a first (i.e. best grade) in all four years.<br>• Third year thesis on object tracking using both conventional video and optical flow. |

| | **School** |
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| | *German* Abitur *with a grade average of 1.6 (1 is best, 6 is worst)* |
| 2016-2017 | Landheim Ammersee — Schondorf am Ammersee, Bavaria, Germany |
| 2015-2016 | Colegio Teresiano de Lagos de Moreno — Lagos de Moreno, Mexico |
| 2011-2015 | Landheim Ammersee — Schondorf am Ammersee, Bavaria, Germany |
| 2006-2011 | Free Steiner School Landsberg — Landsberg am Lech, Bavaria, Germany |

## Work Experience

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| July & August 2020 | **Atos**<br>*Internship - Consulting for data science and artificial intelligence*<br>• Detection of humans through walls based on radio signals as part of a project for the German military (i.e. the *BWI*).<br>• I was tasked with developing a cross-modal teacher-student model and a complex data pipeline involving both traditional statistical methods and modern machine learning techniques.<br>• As part of our SCRUM cycle, I was regularly chosen to present our team's work directly to the customer and to manage further communication. |

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| September 2019 | **Atos**<br>*Internship - Consulting for data science and artificial intelligence*<br>• Development of software that uses machine learning to improve the efficiency of a production line for electrical parts in a Siemens factory.<br>• By making heavy use of data preprocessing and hyper-parameter optimization, my approach was able to beat all alternatives and was chosen to be deployed into production. |

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| August & September 2018 | **Padberg & Partners**<br>*Internship - Web development and task automation*<br>• Contributions to the open-source marketing platform *Mautics* and development of scripts to automate migrations from proprietary software to open-source alternatives. |

## Skills

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| Data Science: | Data visualisation, unstructured data, data mining, data pipelines, exploratory data analysis, presentation and communication |
| Machine learning: | Artificial neural networks, network architectures, hyper-parameter optimisation, XGBoost, linear regression, PCA, clustering, feature engineering |
| Python: | Numpy, Pandas, Scikit-Learn, PyTorch, Tensorflow, Keras, Pytest, Jupyter, SQLAlchemy, OpenCV, Flask, Django |
| JavaScript: | Node, Webpack, Vue.js, Vuex, Vue Router, Vuetify, Axios, Express |
| Other languages: | Rust, Java, SQL, C, Bash, Haskell, Scheme, Prolog, LaTeX |
| Software & DevOps: | Linux, Git, Docker, Docker-Compose, Nginx, PostgreSQL, SSH, Make, Vim |
| Cloud: | Amazon Web Services (AWS), Google Cloud (GCP), Digital Ocean |

## Languages

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| ENGLISH: | Business level |
| GERMAN: | Native |

## Other interests

Generative adversarial networks, Dev-Ops, continuous integration, game theory, evolutionary algorithms, system design, 3D animation, ultra-marathons, powerlifting, rowing and free diving.