

Dr. Peet Cremer

* 27/01/1988

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✉ peet.cremer@gmail.com | in Peet Cremer | @PeetCremer | 📄 Publication list

Enthusiastic Engineering Manager with a can-do attitude and experience in leading teams of up to 20 people. My technical background is in Statistical Physics and Machine Learning. I combine advanced software engineering skills (Python, C++, Rust) with the knowledge of creating Machine Learning pipelines and of building up scalable cloud data platforms. I have an outgoing personality, build trust through honesty, employ strategic thinking, and base decisions on facts and data.



🧰 WORK EXPERIENCE

Principal Engineer - Atlas AI

🏢 COGNITE (Oslo, Norway)

📅 02/2025 - today

Leading technical initiatives in Cognite's Atlas AI platform development:

- Creating evaluation frameworks for measuring performance of Cognite's AI systems and industrial agents
- Leading identification and rollout of productivity-enhancing AI tools including Cursor, Claude Code, and Gemini Code Assist
- Developing low-code AI agent builder capabilities enabling rapid deployment of context-augmented industrial AI agents
- Implementing language model benchmarking frameworks specifically designed for industrial use cases

Director of Engineering

🏢 COGNITE (Oslo, Norway)

📅 02/2023 - 02/2025

Engineering manager of 18 developers in 3 teams, focusing on:

- [contextualization of industrial data](#)
- [data-driven troubleshooting apps](#)
- [Parsing of engineering diagrams for industrial sites](#)

Senior Machine Learning Engineer and Tech Lead

🏢 COGNITE (Oslo, Norway)

📅 08/2021 - 02/2023

- Leading a cross-functional team of 5 software / ML engineers
- Implementing intelligent algorithms to find context in otherwise unstructured industrial data
- Scaling and maintaining microservices to deploy those algorithms in an SaaS setting
- Creating data infrastructure capabilities to build up an industrial knowledge graph

AI Lead Developer

🏢 APTIV (Wuppertal, Germany)

📅 12/2020 - 07/2021

- Planning and execution of Machine Learning and Data Infrastructure projects in the automotive industry
- Design of AI solutions for automotive perception tasks. Guiding the software and hardware integration into the test vehicle
- Participated in a lot of innovation, leading to 7 patents and 1 publication (see [publication list](#))

Software Development Expert

🏢 APTIV (Wuppertal, Germany)

📅 07/2017 - 12/2020

- Leading development of a data platform for storage and retrieval of automotive sensor data as a product owner
- Development of infrastructure solutions for artificial intelligence in automotive applications
- Established a microservice architecture to automate AI workflows
- Supervision of a Master Thesis on using GANs for automotive data style transfer

🎓 EDUCATION

Doctor (Ph.D.), Theoretical Soft Matter Physics

🏢 University of Düsseldorf

📅 2013 - 2017

- Topic: Mesoscale modeling of magnetic elastomers and gels – theory and simulations
- Solving magneto-elastic coupling models using numerical simulations, the finite element method, and density functional theory
- Resulted in 7 publications in recognized peer-reviewed journals (see [publication list](#))

Master of Science (M. Sc.), Physics

🏢 University of Düsseldorf

📅 2012 - 2013

- **Gpa: 1.1** (grades at german university range from 1.0 (best) to 4.0 (worst)). Minor: Mathematics
- Focus on Soft Matter, Plasma Physics, Solid-State and Nanophysics
- Master thesis: "Emergent states in active systems" was published as a [journal article](#)

Bachelor of Science (B. Sc.), Physics

🏢 University of Düsseldorf

📅 2008 - 2012

- **Gpa: 1.2** (grades at german university range from 1.0 (best) to 4.0 (worst)). Minor: Mathematics
- Bachelor thesis: "Orientational fields in Plastic Crystals" was published as a [journal article](#).

🧪 SKILLS

Programming languages

Python

C++

C

Rust

Typescript

IT working knowledge

- Docker
- GitLab
- GitHub
- VS Code
- MongoDB
- PostgreSQL
- flask
- fastAPI
- Kubernetes
- Grafana
- REST
- Linux
- Node.js
- Azure
- GCP
- TeX
- MS Office

Libraries and frameworks

- TensorFlow
- PyTorch
- scikit-learn
- fastAPI
- flask
- numpy
- scipy
- Qt
- pandas
- OpenMP

Machine Learning techniques

SVMs

Gradient Boosting

Population Strategies

Decision Trees

CNNs

Agile software development

Scrum

Kanban

Jira

Confluence

Languages

German (native)

English (C1)

Norwegian (B2)

French (A2)

🏆 ACHIEVEMENTS, HONOURS, AND AWARDS

🏆 Best Poster presentation at the 15th German Ferrofluid Workshop in Rostock (2015).

🏆 DAAD scholarship "RISE in North America" for a three month research internship at Yale University, CT (2010)

⚙️ PROJECTS I CONTRIBUTED IN AS AN INDIVIDUAL CONTRIBUTOR

Vectorstore for retrieval augmented generation <ul style="list-style-type: none">Vector similarity lookup service built on Weaviate to enable industrial chatbot and code completion	🏢 COGNITE, Oslo, Norway	📅 04/2023 - 08/2023
Data backend for industrial knowledge graph <ul style="list-style-type: none">Backend to store symbols and process lines from engineering diagrams in an industrial knowledge graphImplemented in Python/TypeScript, enables advanced graph queries for industrial data interactions	🏢 COGNITE, Oslo, Norway	📅 06/2022 - 08/2022
Annotation API for auxiliary label data <ul style="list-style-type: none">REST API for storing label information on files within COGNITE's data warehouseImplemented in Python with PostgreSQL, achieved production deployment with SLAs in under a year	🏢 COGNITE, Oslo, Norway	📅 08/2021 - 06/2022
Intelligent document scanning tool <ul style="list-style-type: none">Document scanning tool using Azure OCR and line detection algorithms to extract fields from scanned formsSignificantly reduced manual effort required for document processing	🏢 COGNITE, Oslo, Norway	📅 03/2021 - 06/2022
Live execution of detection network in test vehicle <ul style="list-style-type: none">Deployed 3D bounding box detection network on Nvidia Jetson Xavier hardware for live test vehicle execution	🏢 APTIV, Wuppertal, Germany	📅 11/2020 - 12/2020
Runtime environment for AI algorithms <ul style="list-style-type: none">Runtime environment written in Rust for live execution of AI algorithms in test vehiclesImplemented preprocessing, postprocessing, and abstractions for different sensor/network combinations	🏢 APTIV, Wuppertal, Germany	📅 06/2020 - 10/2020
Machine Learning automation using microservices <ul style="list-style-type: none">Python microservice framework for automatic execution of ML algorithms with trigger-based pipelines	🏢 APTIV, Wuppertal, Germany	📅 03/2020 - 05/2020
Affectiva collaboration - Facial expression detection <ul style="list-style-type: none">Emergency support for deploying facial expression detection system using TensorFlow and TF-Lite	🏢 Affectiva, Boston, MA	📅 08/2019
Product Owner for automotive data warehouse <ul style="list-style-type: none">Led SCRUM team of 5 developers to establish data warehouse for automotive sensor dataMEAN stack solution with REST API, Python client, and video playback frontend hosted in Azure	🏢 APTIV, Wuppertal, Germany	📅 02/2019 - 02/2020
3D object detection on automotive radar <ul style="list-style-type: none">Led team of 5 engineers for CNN-based 3D object detection proof of concept on automotive radar data	🏢 APTIV, Wuppertal, Germany	📅 12/2018 - 01/2019
LiDAR labeling tool <ul style="list-style-type: none">Web-based 3D bounding box labeling tool for LiDAR point clouds using TypeScript and MEAN stackContributed user management, group management, and data upload features	🏢 APTIV, Wuppertal, Germany	📅 01/2018 - 12/2018

📖 TEACHING

Co-Organizer of the NorwAI 2022 hackathon <ul style="list-style-type: none">Organizing and conducting a Data Science hackathon in Trondheim with Cognite and researchers from NTNUFinding a suitable dataset, defining a task, supervising the students during the event, and evaluating the contributions	🏢 NTNU Trondheim, Norway	📅 08/2022 - 10/2022
Lecturer on artificial intelligence in autonomous driving <ul style="list-style-type: none">Lecture "Artificial Intelligence Based Sensor Signal Processing for Autonomous Driving" held in collaboration with colleagues from APTIVPrepared and held lectures and exercises about Numerical Optimization in Data Science, Support Vector Machines, and Gradient Boosting	🏢 University of Wuppertal, Germany	📅 10/2020 - 04/2021
Master thesis supervision	🏢 APTIV, Wuppertal, Germany	📅 03/2019 - 09/2019

- Supervised a master student on using GANs for automotive data style transfer
- Created artificial LiDAR data by modding the video game GTA: V, then trained a GAN on real LiDAR data to do the domain transform
- Tested and benchmarked this approach with a birds-eye-view 2D object detection model

Bachelor thesis supervision

🏢 University of Düsseldorf,
Germany

📅 2016

- Supervised a bachelor student on the numerical simulation of magnetic gels

Teaching assistant for theoretical physics lectures

🏢 University of Düsseldorf,
Germany

📅 2013-2017

- Lectures: Quantum Mechanics and Statistical Mechanics
- Created homeworks and gave exercise classes
- Answered student questions about the lecture topics
- Designed and held oral and written exams

🎵 ABOUT ME

Interests I am enthusiastic about AI, tech and science related topics. To follow the recent developments in machine learning, I like to read papers on arXiv and from the ICLR conference and I follow [towardsdata-science](#) and the [/r/MachineLearning](#) subreddit. To stay on top of new trends in software engineering and science topics, I regularly browse [Hacker News](#). Additionally I like to improve my leadership and organization skills by reading related books.

Activities Sozializing with friends has always been important to me. I am an enthusiastic Pen & Paper gamemaster since 20 years and often meet with friends to indulge together in this hobby. Keeping myself healthy with a good diet and regular exercise is another priority for me. To achieve this, I like to cook quality food with fresh ingredients, and I go running several times a week. To keep myself in shape and the environment clean, I take my racing bike to reach places whenever possible