

HENDRIK CHICHE

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 [Portfolio](#)

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 [chichonnade](#)

Experience

Mainspring Energy Inc.

Sept. 2023 - present

Fleet Operations & Analytics Engineer, Full-Time

Menlo Park, CA

- Introduced predictive maintenance to detect early failures in the linear generator fleet.
- Proved that it is possible to detect the failure of a part responsible of 62% of the fleet's downtime in live field data using an LSTM auto-encoder.
- Trained an auto-encoder transformer to classify multivariate time series data, highlighting 86% of failures up to 2 days in advance.

GENCI

May 2024 - present

Research collaborator, Part-Time

Paris, France

- Adapted the Image Super-Resolution via Iterative Refinement paper (2021, Saharia et al.) to work on 3D objects and double the resolution of MRI head scans.  [portfolio](#)
- Collected 3Tb of MRI data (2000 patients) to train a more general model on the cluster.

Zendar

Oct. 2022 - May 2023

Student researcher, Part-Time

Berkeley, CA

- Developed an object labelling algorithm that transfers labels from 2D images to a 3D radar scene with 35.8% increase in accuracy over traditional 2D projection.
- Tested the pipeline on a car equipped with ZENDAR's camera-radar technology  [demo](#)

Fusion Fuels

Oct. 2022 - Apr 2023

Co-Founder

Berkeley, CA

- Investigated scalable technologies to provide nuclear fusion fuel to private and public research programs
- Incubated at Berkeley Skydeck pad-13 and recommended for NSF Innovation Corps national rounds

Elsan

Feb. 2021 – Aug. 2021

Data analyst intern

Paris, France

- Analyzed healthcare access in France during the pandemic
- Built a dashboard to highlight regions with poor coverage

Education

University of California at Berkeley

Berkeley, CA

- **Master of Engineering in Mechanical Engineering** (Sep. 2022 – May 2023)
 - * Statistics and data science
 - * Final project: Radar object labelling for autonomous driving
- **Auditing CS294 Deep Unsupervised Learning** (Jan. 2024 – May 2024)
 - * Theory behind generative models including VAEs, GANs and Diffusion models

Arts & Métiers Institute of Technology

Paris, France

Master of Engineering in Mechanical Engineering

Sep. 2016 – Jul. 2021

- Top-ranking French Engineering “Grande École”
- Mechanical Engineering, Computer Science, Applied Mathematics

Skills

- Research: Super-resolution for medical imaging sponsored by GENCI HPC
- Fluent languages: English, French, German
- Hobbies : Surfing, Spearfishing, Skateboarding