

Hugo Vergnes

AI RESEARCH SCIENTIST · COMPUTER VISION

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Summary

Research Scientist at a Bay Area start-up with 3+ years of experience in AI and machine learning development, specializing in backend systems for a fully autonomous cancer screening detection pipeline. Skilled in building scalable machine learning models, data pipelines, and deploying AI solutions in production. Eager to expand expertise to new domains, tackle complex challenges, and continuously adopt new technologies and tools.

Work Experience

Whiterabbit.ai INC

Redwood City, California USA

AI RESEARCH SCIENTIST

April. 2022 - Current

- Designed and implemented screening exam classifiers achieving 99% sensitivity while maintaining high rule-out rate, significantly enhancing early cancer detection in mammograms.
- Developed a comprehensive suite of AI algorithms for evaluating diagnostic quality, outperforming radiologists with over 15 years of experience in sensitivity and specificity.
- Conducted in-depth analysis and testing of AI-based diagnostic algorithms, ensuring high reliability and robustness in clinical settings. Submitted to the FDA and addressed feedback. It is pending approval.

Stanford AIMI

Stanford, California USA

PART TIME - RESEARCH ASSISTANT

Jan. 2021 - June. 2021

- Research work at AIMI aiming to find lymphomas in children's full-body scan and automate Deauville score calculation.
- Data clean-up, co-registration and benchmark for PET and MRI scans.

Extrality

Paris, France

DEEP LEARNING RESEARCH INTERN

Apr. 2020 - August. 2020

- Implemented a Graph Deep Learning algorithm to generate a mesh with +40 000 nodes.
- Achieved state-of-the-art performances on 2D meshes with 1024 nodes.
- Conducted extensive search to design a lightweight, scalable model for future use.

McKinsey & Company

Paris, France

SUMMER BUSINESS ANALYST

Jun. 2019 - Aug. 2019

- Implemented a sequential Monte-Carlo algorithm based on Bayesian inferences to zero in on unknown values.
- Designed +100 tests on a Machine Learning algorithm to enhance the model's predictive capability.
- Conducted extensive press search with the client to adapt models to the market need.

Education

Stanford University

Stanford, California USA

MASTER OF SCIENCE - STATISTICS & DATA SCIENCE

Sep. 2020 - Jun. 2022

- Focus on Deep Learning and computer vision, with research work at AIMI aiming to find lymphomas in children's full-body scan and automate the Deauville score.
- Relevant coursework includes Applied Statistics, Statistical Learning, Deep Learning, Software Development in Python and C++.

Ecole Polytechnique

Paris, France

ENGINEERING DIPLOMA, MASTER OF SCIENCE - APPLIED MATHS

Sep. 2017 - Jun. 2020

- France's leading universities for science and engineering

Projects & Scientific work

RSNA 2024

Chicago, Michigan USA

FIRST AUTHOR & PRESENTER

Dec. 2024

- A comparative study of AI and expert Radiologist performance for technical recall assessment in screening mammography.