CLEMENT WANG

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 clementw168 — in clem-wang — clem-wang

Master of Engineering student with a strong interest in Machine learning.

EDUCATION

Master of Engineering, CentraleSupélec — University of Paris-Saclay Sept 2020 – Ongoing
GPA: 3.84
Relevant coursework: machine learning, statistics, parallel calculus, algorithm & complexity, signal processing.

Preparatory Courses - MPSI/MP*, Lycée Henri IV Sept 2018 – Jul 2020

EXPERIENCE

Computer vision R&D Intern Feb 2023 – Ongoing
Stryker *Freiburg-im-Breisgau, Germany*
- Developed a framework for 3D position tracking of surgery instruments. 2D key points detection using High-resolution network achieving 1.5 pixels error. Triangulation of 3D position from frames on different timestamps.
- Detected centroids on NIR images with subpixel precision. Achieved 0.003 pixel error with Mobilenet modules, decreasing the error by 15 times compared to previous methods. Currently applying for a patent.

Co-Founder & MLOps Engineer Dec 2022 – Ongoing
Photogen *Remote — Paris, France*
- Implemented and pushed state-of-the-art Diffusion models to achieve photorealism by adapting Dreambooth.
- Set up cloud infrastructure on AWS and optimized costs with queue service, batch jobs, and autoscaling.
- Achieved group photo generation with several Dreambooth weights and Controlnet.

Data scientist Intern Aug 2022 – Jan 2023
Polygon Technologies *Santa Monica, United States*
- Led research on how to diagnose mental diseases from videos of cognitive tests. Benchmarking performance of speech-to-text, voice activity, face landmarks, and human pose detection algorithms. Video segmentation from time series segmentation on extracted features.
- Accelerated pipelines by setting up AWS Batch service with GPU.

Machine Learning Consultant Feb 2022 – Jul 2022
Paris Digital Lab — Digital Tech Year program *Paris, France*
- *French Ministry of Armed Forces*: Achieved 0.95 mAP @ IOU 0.5 with YOLOv3 on radio wave detection.
- *L'Oréal*: Retrieved lipstick on selfies. Reached 1% normalized MSE on optical properties with deep regression.
- *Oorion*: Automated annotation of classification and object detection datasets with few-shot algorithms.

EXTRA-CURRICULAR ACTIVITIES

President of Automatants, AI student organization Managed a team of 20 members, provided courses for 50+ students, organized AI-related events, gathered knowledge and wrote summaries of 100+ papers.

Applied Deep Leaning course 2-semester courses by Maziar Raissi, University of Colorado Boulder. Computer vision, natural language processing, speech recognition.

ML competitions Leaf nothing behind (1st/10) on pixelwise regression, Paris Gen AI (4th/10) on Generative AI.

Private tutor 100+ hours of courses in Mathematics and computer science for undergraduate students.

SKILLS

Frameworks	Pytorch, Tensorflow, Pandas, NumPy, Sklearn, OpenCV, Plotly, Streamlit
Technologies	Bash, Linux, Docker, AWS, Jupyter, Git, Weights & Biases