

Tom Genlis





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Recent MSc graduate in Artificial Intelligence from EPITA, specializing in Computer Vision and Machine Learning.

Seeking opportunities to join a cutting-edge research Al lab or Al role.

EDUCATION

École pour l'informatique et les techniques avancées (EPITA), Paris, FR

Sep 2021 - Aug 2024

Master of Science in Engineering – Artificial Intelligence and Data Science (Graduated in August 2024, GPA: 3.85/4.0)

Lycée Kléber, Strasbourg, FR

Sep 2019 - Aug 2021

Undergraduate Preparation, specialization in Computer Science

WORK EXPERIENCE

Siemens Healthineers, Princeton, USA - Al Research Intern

Feb 2024 - Aug 2024

- Collaborated with a research team for Al-driven solutions that directly enhance +2.6 billion patient diagnoses each year.
- Developed segmentation and detection AI models for cardiovascular imaging using Python and PyTorch.
- Improved accuracy of cardiac analyses on CT scans with varied contrast levels, achieving a Dice score >0.9 in multiclass segmentation and a Euclidean distance <3mm in detection.
- Accelerated pipelines by 8.15x for data loading and reduced training time by 4.96x through leveraging PyTorch Lightning, multiprocessing, and GPU acceleration for data augmentation.

Skills: Research, Deep Learning, Segmentation, Data Analysis, Machine Learning, Medical Imaging, PyTorch / Lightning

Capgemini Inc, Strasbourg, FR - Machine Learning Engineer Intern

Sep 2022 - Jan 2023

- Migrated a car recognition app from prototype to production, utilizing Azure DevOps pipelines.
- Built a detection model using TensorFlow, resulting in a 76% accuracy rate for live car brand identification.
 Skills: TensorFlow, Deep Learning, Detection, Azure

ACHIEVEMENTS

LLAM4RT: On-device Museum Guide AI | Only team among 24+ with on-device LLM (Consumer AI 24H Edge Hackathon)

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- Implemented a distilled Large Language Model (LLM) solution entirely on-device using Swift and Ilama.cpp, incorporating advanced features like Retrieval-Augmented Generation (RAG) and memory, with no prior experience in the language.
- Collaborated in creating a custom dataset for the Musée de l'Orangerie.
- Integrated YOLOv11 for real-time painting detection and recognition. **Skills:** Computer Vision, Natural Language Processing, Python, Swift, PyTorch, HuggingFace, Distillation

Core Team & Lead | Google Developer Student Clubs (EPITA Club sponsored by Google)

- Selected by Google to advance a diverse tech ecosystem by organizing impactful events.
- Leading a team of +12 team leaders, curating content and propelling community engagement.
- Collaborating with GDSC Philippines to develop an open-source app connecting students based on interests.
- Organized and led a computer vision workshop, attracting over 50 attendees, highlighted by a Kaggle contest with +25 competitive entrants.

Solo Indie Game Developer | Char3Studio

Developing engaging games with Unity, achieved 80,000+ downloads and maintained a 4.8/5 average rating.

PROJECTS

Deep Q-Network with Rainbow Enhancements

- Reimplemented and extended the foundational Deep Q-Network (DQN) using PyTorch and Gymnasium, incorporating advanced training techniques to stabilize training
- Integrated key components such as Noisy Networks, Dueling Networks, Double DQN, N-step Learning,
 Distributional DQN, and Prioritized Experience Replay to improve exploration and learning stability.
- Achieved 514% of human performance in Breakout and 326% in Assault after training on 5 million frames.
- Emphasized computational efficiency, achieving state-of-the-art performance on limited resources.
 Skills: Deep Reinforcement Learning, PyTorch, Python, Gymnasium, Data Structures, Algorithms, Research, Computer Vision.

Woof Vision

Developed a ViT transformer model mobile app, achieving 92.3% accuracy in identifying dog breeds using TensorFlow.
 Skills: Deep Learning, Fine Tuning, Transfer Learning, TensorFlow

Skills

Programming & Tools: Python | C | C++ | C# | Bash | SQL | NoSQL | Docker | Git | Azure | SLURM | Linux AI & Data Science: PyTorch | TensorFlow | Scikit-Learn | PyTorch Lightning | OpenCV | Spark | Kafka | Hugging Face Languages: French (Native) | English (Proficient)