Salim Khazem

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Objective

Seeking a challenging position as a Research Scientist with a focus on advancing the state-of-the-art in computer vision and deep learning. Committed to contributing to cutting-edge research projects, expanding knowledge in the field, and collaborating with a dynamic team to address real-world problems.

Education

PhD, Computer Vision and Deep Learning — **Metz, France**
CentraleSupelec and IRL GeorgiaTech-CNRS — *2022–Present (Expected to finish in 2024)*

- Advisors: Dr. Cédric Pradalier and Dr. Jeremy Fix.
- Subject: Deep learning for detection and prediction of Knots in wood logs

Master of Computer Science and Robotics — **Paris, France**
Paris Saclay University — *2019–2021*

- Machine learning
- Signal processing
- Computer vision and image processing
- Deep Learning
- Robot motion planning
- Initiation to research

Bachelor of Electrical Engineering and Computer Science — **Paris, France**
Paris-Est Marne-la-vallee University — *2018–2019*

- Logic
- Algorithmic
- Programming theory
- Discrete Mathematics
- Systems and Networking
- Embedded systems

Publications

Journal

Deep learning for the detection of semantic features in tree X-ray CT scans, S. Khazem, A. Richard, J. Fix, C. Pradalier, *Artificial Intelligence in Agriculture*, 2023

Conference

Improving Knot Prediction in Wood Logs with Longitudinal Feature Propagation, S. Khazem, J. Fix, C. Pradalier, 2023 *ICVS*, 2023

Minimizing subject-dependent calibration for BCI with Riemannian transfer learning, S. Khazem, S. Chevallier, Q. Barthelemy, K. Haroun, C. Nous, *NER*, 2021

Supervision

Supervised Bachelor and Master-level semester projects on Object Detection, Semantic Segmentation, Vision Transformers, Self-Supervised Learning, Uncertainty Quantification, and Conformal Prediction for Image Classification.
Developed skills: Teaching, Communication, and Research.

Teaching

CentraleSupelec
Teaching Assistant *2022–2023*
Machine Learning and Natural Language Processing, Project advisor - Master level

Work Experience

GeorgiaTech-CNRS & CentraleSupelec **France**
Researcher AI *2021–Present*
- Consulting in an R&D company.
- Supervision of Project in AI.
- Teaching ML/DL and Labworks supervision.

Capgemini Engineering **France**
Researcher AI & Data Scientist (6 months) *2021*
- Research in deep learning for computer vision and object detection and pose estimation in industrial environnement (Airbus case)
- Implementing of SOTA architecture for 6D pose estimation object.
- Implementing of SOTA architecture for anomalies and defects detection on aircrafts using camera.
- Training and deploying models into prodcution.

LISV Lab **France**
Researcher AI Intern (7 months) *2020*
- Anomaly and outlier detection using CNNs and spectral images
- Transfer learning for EEG signals in BCI

Computer science skills

Python, PyTorch, Numpy, Tensorflow, C++, Git, LaTeX, Bash, Linux, Docker, Cloud

Communication Activities

- Presented a poster on "Tree semantic features detection using CNN" at AI Day, Nancy, 2023.
- Presented a talk on "Improving Knot Prediction in Wood Logs with Longitudinal Feature Propagation" at ICVS conference, Vienna, 2023.
- Reviewer for ECML-PKDD 2022, ICVS 2023.

References

Dr. Cédric Pradalier cedric.pradalier@georgiatech-metz.fr
Head of DREAM Lab at IRL2958 GT-CNRS

Dr. Jeremy Fix jeremy.fix@centralesupelec.fr
Associate Professor at LORIA, CentraleSupelec