


Arthur ZUCKER

MSc Machine Learning Student at ENS Paris-Saclay | Looking for a 4 to 6 months internship


 arthur-zucker

 +33687661840

 2 rue Galvani, 91300, Massy, France

 My website

 arthur.zucker@ens-paris-saclay.fr












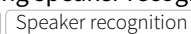



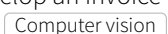










 22 years old

In order to graduate from my MSc, I need to complete a **Research oriented** internship. I have a lot of experience in applied mathematics and programming, yet I specialize in deep learning. I wish to work on Deep Learning projects, and would love to participate in highly technical research. I am open to pursue the internship during a PhD.

SKILLS

AI, Deep Learning	Python:Pytorch, Tensorflow, Keras, Open Cv, Librosa
Programming languages	Python,C,C++, R, MatLab,Fortran, Shell,HTML, CSS, Java, MIPS, Go
Programming tools	Gitlab & Github, Team Viewer, Google Colabs, Flutter (Dart)
Modelling	GAML (Multi agent programming language)
Editing languages	Markdown, \LaTeX , Jupyter Notebook
Mathematics for deep learning	Optimisation and Computation, Statistics and Probability, Complexity and Calculus
Other	High Performance Computing (GPU programming, OpenMP, MPI, CUDA), Advanced Cryptography (openssl), Game programming (GODOT), Quantum Computing

PROFESSIONAL EXPERIENCES

Feb. 22nd 2021 Aug. 20th 2021	Computer Vision intern DeepLearning, IMAGE PROCESSING TEAM, SAFRAN Massy, France  <ul style="list-style-type: none">> Explored and synthesized the state of the art (SOTA) in the field of RGBD semantic segmentation> Implemented spatially deformable convolution on top of SOTA Hierarchical Multi-Scale Attention architecture blocks to increase semantic segmentation results on the Cityscapes dataset for autonomous agents applications.> Rigorously compared the effect of the added new blocks in terms various metrics in an ablation study.> Ported deformable convolutions from pytorch 0.4 to pytorch 1.4+ <p>     </p> <p>Results Successfully implemented different architectures, improving qualitative results at validation and reaching performances comparable to SOTA</p>
July 28th 2020 now	Research Assistant Deep Learning, BIOSPHERE LABORATORY, Kyoto University, Japan  <ul style="list-style-type: none">> Developed a 3 steps PAM (Passive Acoustic Monitoring) pipeline for Flying Foxes (Mega-Bats)> Implemented an automatic audio event detector using SOTA, implemented YOLOR, SincNet and DENet.> Worked on zero-shot learning speaker recognition-related tasks using siamese networks. <p>   </p> <p>Engagement The research is still going on as a side project. Recently presented a poster to the 15th European Bat Research Symposium (EBRS) conference. Find more about that on my website.</p>
June 9th 2019 Aug. 9th 2019	Intern AI software developer, AI TEAM, Chainos Solution, Hanoï, Vietnam  <ul style="list-style-type: none">> Worked on computer vision projects : image to excel, CAD reader, face recognition> Received Deep Learning courses and python oriented for AI trainings> First approach to Face Recognition using haar-like features> Helped to develop an invoice reader API <p>     </p> <p>Results Wrote a research article with a teammate on Automatic Table structure recognition</p>
July 1st 2018 Aug. 30th 2018	Trainee Computer Scientist, BIO-INFORMATIC LABORATORY, Kyoto University, Japan  <ul style="list-style-type: none">> Developed a solution in R for automatic audio segmentation of bat calls in natural recordings> Field work : captured and studied bats under the tutoring of Dr. Vincenot> Research driven by the need to protect the species from culling> Modeled bat trajectories <p>     </p> <p>Engagement Became a member of the IBRG (https://www.batresearch.net/)</p>

EDUCATION

- 2021-2022 **MSc Machine Learning at ENS Paris-Saclay**, in the “Mathematics, Vision and Learning” (MVA), Paris, France. Enrolled in : *Reinforcement Learning, Computer Vision and object recognition, Convex Optimisation, Advanced Learning for Text and Graphs, Deep Learning*
- 2016-2021 **Engineering degree at Polytech Sorbonne, Sorbonne University**, in the “Mathematics Applied to Computer Science”. **Major of promotion from 2019 to 2021**

PROJECTS

- DEEP LEARNING : STATIC AND DYNAMIC HAND GESTURES RECOGNITION** 2020 - 2021
Gesture classification using 29 different features. Implemented and evaluated classical ML algorithms as well as siamese Neural Networks. Non-guided, autonomous Neural Network architecture research.
Pytorch Siamese Network Research
- CUDA HIGH PERFORMANCE COMPUTING PROJECT** 2020 - 2021
Parallelisation of the *Batch merge* and the *batch sort* algorithm using different type of computer memory.
CUDA C++ Optimisation
- FINITE ELEMENT MODELLING** 2020 - 2021
Implemented Galerkin’s Finite element Method (GFEM) from scratch using python.
Python Modelling Github
- TWIZZY CONTEST** 2020 - 2021
Earned the second place in the national twizzy contest : an innovation contest organised by Renault and Segula technologies with more than 80 french engineering schools competing. Team leader and pitcher
Innovation Flutter Project management SCRUM

REFERENCES

- @ **Dr. Myriam Compte**
Former director of Polytech Sorbonne’s engineering school
Sorbonne University, France
- @ **Dr. Vincenot**
Assistant professor, researcher
Kyoto university, Kyoto Japan
- @ **Dr. Patrick Gallinari**
Deep Learning researcher
LIP6 laboratory, Sorbonne University, France
- @ **Dr. Bouillaguet Charles**
Cryptography researcher
LIP6 laboratory, Sorbonne University, France
- @ **Dr. Hacène Ouzia**
Optimisation researcher
LIP6 laboratory, Sorbonne University, France
- @ **Dr. Xavier Tannier**
Responsible of the Applied Mathematics and Computer Science promotion, NLP researcher
Sorbonne University

COURSES FOLLOWED

- x₂ Mathematics** : Topology, Linear algebra, Numerical Analysis, Convolutions & Fourier, Polynomial system resolution, Analysis
Differential Calculus, EDP analysis, Finite Element methods
- Statistics** : Statistics and probabilities, Data analysis, Inferential statistics, statistical learning
- Computer Science** : General Algorithms, Distributed Computing, Decidability and complexity, Floating point computation, Signal Processing, HPC, Security and Cryptography, Data-bases
- AI** : Reinforcement Learning, Computer Vision and Object recognition, Deep Learning, Advanced Learning for Text and Graph, Convex optimization and applications in machine learning, Introduction to Medical Image Analysis
- Project management** : Agile development, SCRUM

LANGUAGES

- French (native) ●●●●●
- English (C2) ●●●●○
- Japanese (A2) ●●○○○
- Spanish (A2) ●●○○○
- Korean (A2) ●●○○○

PROFILE

- > Curious and passionate about deep learning.
- > Open minded, thrive to explore new ideas and new cultures.
- > Optimistic and great at working in teams, used to be team leader.
- > Disciplined and hardworking.