Zaccarie Kanit

- (+33) 6 51 47 93 04
- @ zaccarie.kanit@imt-atlantique.net
- in zaccarie-kanit
- ⌂ n2oblife

Languages

French - *Native speaker*
English - *Fluent - C1*
German - *Professional - B2*
Arabic - *Professional - B1*

Skills

Programming

- *Python, SQL, R, Matlab*
- *Java, C/C++, CMake*
- *Linux, bash, PowerShell*
- *PyTorch, LibTorch, AdapterHub*
- *OpenCV (C++)*
- *Parallele Computing, Cuda*
- *VHDL, FPGA, RaspberryPi, ZedBoard*
- *Unity, C#, Hololens*
- *Network, Sysadmin, Cisco*
- *gitlab, CI/CD, Docker*
- *Graphic and CLI debugging*

Office skills

- *Office Pack, Google Tools and AppScript*
- *LaTeX, Doxygen*
- *Zapier, AirTable*

Audiovisual editing

- *Adobe Premier / Photoshop / Audition, Gimp*
- *FLStudio*
- *OBS*

Interests

Sports

- *karate black belt (8y), basket-ball in club (6y), biking (8y), thaï boxe (2y)*

Leisures

- *videogames' design (12y), bassist in a groupe (5y), theater at the Paris' Conservatory (4y), cinema talkshows (8y)*

M2 Engineering Student looking for an internship as a Graphic Programmer starting from April 2024

Experience

Software Engineer Intern SIMULANDS October 2023 - March 2024

- *A Swiss medtech startup that develops Human Grade simulators that replicate real procedural experiences with accurate device performance insights.*
- *Mixed Reality Software developement : training a **Deep Learning segmentation model to track hands and surgical tools** and developing a stereovision algorithm to estimate their position / **optimizing the model and parallelizing the algorithm** to ensure **real time computation** / **designing hardware and software architecture** to improve computation / optimizing the software setup for stabilization / building AR Unity scenes / gamifying procedures to ease the learning curve.*
- *Database administration : migrating our subcontractor's database / creating a pipeline to perform redundant statistic analysis instead of the marketing team / training analysis to give insights on the trainings.*

Research Assistant Intern CEA List April 2023 - August 2023

- *A research institute that focuses on digital systems to drive business competitiveness. Its Text and Image Analysis Laboratory studies Deep Learning models, their improvement and their use.*
- *Project : Researching a **state-of-the-art Transformer based NLP model** / developing its training pipeline in Python and implementating its conversion in C++ / training the model with CEA's cluster / developing the **inference using an optimized C++ engine** to achieve a high frequency of tokens computed / integrating my work into their multilingual NLP model / focusing on the **documentation and sustainability of the work**.*

Network Administrator, Secretary, Training Manager ResEl 2021 - 2023

- *A technical association providing a network of +3K machines across two campuses on different cities, and enabling members to acquire essential technological skills.*
- *Learning the ins and outs of project management in the field of network engineering as a **manager of a team of student administrators**. I also **ensured the legal framework of the association** and its events especially when planned with professional partners as board member.*
- *Organizing events such as the Google Hash code and the FedeRez Days and seting training programs for students to learn from the basis of IT to advanced network skills.*
- *Project : **Development of an inverter monitoring tool***

Right hand of the CEO PostExo February 2022

- *Automation of the registering process using the website and Zapier to schedule meetings*
- *Process automation and website redesign*
- *Establishment of communication strategies using social media / website redesign with more flexible architecture thought to be adaptable*

Research Assistant Intern Institut Curie January 2015 - June 2015

- *Shadowing researchers once a week, performing basic manipulations to maintain growth of cultures and electrophorese to split the groups according to genes presence, and delivering presentations on the results and on the work performed*

Education

Master in Engineering specialized in Embedded Systems, Excellence Program for Research
IMT Atlantique 2021 - 2025

- *5th-ranked engineering school in France*
- *Mathematics, **Computer Vision**, **Data**, Sc Computing, **graph theory**, logistic optimization.*
- *Embedded Systems: **Algorithm-to-Chip Design & Architecture**, Low-Level Software-Hardware Interactions, **Parallel Computing**, Stochastic Dynamic Modeling, **Deep Learning Optimization***
- *School Projects: **DevOps of a Deep Learning based audio measurement service in Docker** and .deb with Orange (telecom company) / preliminary study of an electronic waste recycling startup*
- *Research Projects: Implementation of a **Fast resolution algorithm in C++ to compute eeg signals in real time** / state-of-the-art in ML comparing CNN and Vision Transformer in term of inference time and ressources consumption / course given by myself on Inversible CMOS Logic to introduce this field of research to students in order to follow a Naoya Onizawa conference*

MicroMaster program in Statistics and Data Science MITx February 2023 - May 2023

- *Machine Learning in Python : From Linear Models to Deep Learning - 230h*
- *Slides and lab sessions teaching from **Linear Classifier and recommander systems to Unsupervised and Reinforcement Learning** with projects every week to apply the notions*

Bachelor in Mathematics and Physics, preparatory classes   Lycée Fénelon   2018 - 2021

- *Preparatory classes, are intensive two-year programs designed to prepare students for admission to prestigious engineering schools in France*
- *Advanced theorectical studies in Mathematics, Physics, Chemistry and general knowledge*
- *Practical lab sessions to apply some chapters studied in applied physics and chemistery*

High School Diploma, Baccalaureat of Science   Lycée Henri IV   2015 - 2018

- *A beacon of academic excellence in France, 2nd best French high school*
- *With Honors, studiying Sciences and specializing in Mathematics and Computer Science*

Volunteering

President   Kebab Club   2021 - 2022

- *Weekly sale of a hundred homemade kebabs on campus with a team of 8 other students.*
- ***Organizing the logistics and communication** of each event with a focus on hygien and security.*
- *Creating new partners relationship with local actors to have fresh products.*

Vice-President   Arts Committee   2021 - 2022

- *The Art Commitee is the organization which manages events and clubs on the campus. The Bureau is elected by students according to the capacity of a team to conduct art oriented events.*
- *I **managed a team of 18 students** with respective broad roles. I managed this team through my term and filled paper to ensure the legal framework and security of all the events.*
- *The events : concerts by students and local musicians, western France cultural events, a week of artistic events with local performers, a cultural trip in Amsterdam for 90 students.*

Sound & Light Manager   S&L Club   2021 - 2022

- *Technical and security manager for setting up events*
- *Writing security files to prepare the*

Project Manager   Sustainable Development Bureau   2021 - 2022

- *Bike-sharing projet : managing the renting system, maintaining the parc et do paperwork*
- *Orchard Project: Maintenance and planting of apple tree samplings on campus / teaching to students how to take care of an orchard*

Mathematics and Physics Teacher   Renovo   2016 - 2022

- *Teaching to classes of students from disadvantaged neighborhoods during the holidays*
- *Cultural and inspiring outings in museum and local startups and companies with the students*

Food Assistance   Ensemble pour l'Avenir   2012 - 2016

- *Preparation and meal services of 150 covers per evening to homeless people during summer holidays*

RECOMMANDATION LETTER FOR THE APPLICATION OF MR. ZACCARIE KANIT

As responsible of the "Embedded and Heterogeneous Systems" major at IMT Atlantique and a lecturer in several courses, I had the pleasure of teaching and interacting with Mr. Zaccarie Kanit during his second year at IMT Atlantique (2022-2023), where he chose this major.

In particular, I had the opportunity to interact with him during the course "Embedded Systems: Hardware-Software Interaction" for which I am responsible, as well as the courses "Design Methodologies - from Algorithm to Chip" and "High-Level Circuit Design". Throughout the class and lab sessions, Zaccarie demonstrated high levels of rigor, thoughtfulness, motivation and technical skills.

Zaccarie has acquired very good skills in embedded systems, and has managed to successfully complete all the courses offered in the Embedded and Heterogeneous Systems major. He gave us a good impression, both in terms of his scientific skills and his commitment.

At the start of this new academic year (2023-2024), I also very much appreciated his maturity, his availability and his involvement in sharing his experience with the new students who are going to follow this same major and answering their questions.

I'm fully convinced of Zaccarie's scientific qualities and skills in theory and practice, in addition to his genuine human qualities and excellent communication skills.

For all these reasons, I strongly support Mr. Zaccarie Kanit's application. I am convinced that he will give full satisfaction and achieve very good results. I remain at your disposal should you require any further information or clarification.

Sincerely,

November 10th, 2023, Brest – France

Amer Baghdadi, PhD, HDR

Professor at IMT Atlantique
Head of the "Embedded and Heterogeneous Systems" major at IMT Atlantique
Head of the Algorithm Architecture Interactions (2AI) research team
Mathematical and Electrical Engineering (MEE) department
CNRS UMR 6285 Lab-STICC laboratory
Phone: +33 2 29 00 10 37
Email: amer.baghdadi@imt-atlantique.fr

IMT Atlantique Bretagne-Pays de la Loire - www.imt-atlantique.fr

Campus de Brest	Campus de Nantes	Campus de Rennes
Technopôle Brest-Iroise	4, rue Alfred Kastler - La Chantrerie	2, rue de la Châtaigneraie
CS 83818	CS 20722	CS 17607
29238 Brest Cedex 03	44307 Nantes Cedex 3	35576 Cesson Sévigné Cedex
T +33 (0)2 29 00 11 11	T +33 (0)2 51 85 81 00	T +33 (0)2 99 12 70 00
F +33 (0)2 29 00 10 00	F +33 (0)2 51 85 81 99	F +33 (0)2 99 12 70 08