

# Sid Ali HAMIDECHE

## CONTACT INFORMATION

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BIRTH DATE: March 15<sup>th</sup>, 1994  
ADDRESS: 78180 Montigny-le-Bretonneux, France  
EMAIL: [sid-ali.hamideche@protonmail.com](mailto:sid-ali.hamideche@protonmail.com), [didousidali@gmail.com](mailto:didousidali@gmail.com)  
LINKEDIN: <https://www.linkedin.com/in/sid-ali-hamideche-350071151/>  
GITHUB: <https://github.com/didosidali>  
WEBSITE: <https://didosidali.github.io/website>

## EXPERIENCE

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- JUN 2020-DEC 2024 Research Engineer & PhD candidate at **Nokia Bell Labs/University of Rennes**, Massy/Nozay/Rennes, France
- Detecting the context of use of mobile networks users for beyond 5G/6G networks
  - User environment detection for mobile networks using Machine Learning techniques (LSTM, CNN..) on raw time series 3gpp radio signal measurements
  - Mobile networks user application/services detection using Machine learning
  - Representation Learning for feature extraction on huge amount of 3gpp radio signal measurement data
  - Federated learning for next generation mobile network (beyond 5G/6G) that are highly distributed
  - Developed android application for collection mobile network measurements (RSRP, RSRQ...)
- NOV 2019-JAN 2020 Software Engineer at **Altim France**, Boulogne-Billancourt, France
- MAR 2019-SEP 2019 Computer vision and machine learning internship at **VEDECOM**, Versailles, France  
Working on unsupervised and self-supervised classification methods for self-driving cars
- JUN-AUG 2018 R&D Engineer at **HB Technologies**, Algiers, Algeria  
Designed and developed applets for smart card
- FEB-JUN 2017 Image processing internship at **Laboratoire de Recherche en Intelligence Artificielle (LRIA)**, Algiers, Algeria  
Developed a new shape descriptor and realized a thesis entitled: "Multiple approximation of 2D shapes (Continuation of bachelor's project)"
- FEB-JUN 2015 Image processing internship at **Laboratoire de Recherche en Intelligence Artificielle (LRIA)**, Algiers, Algeria  
Studied and implemented different shape descriptors approaches and realized a thesis entitled: "Shape matching (Image processing)"

## EDUCATION

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- DEC 2024 PhD in computer science: Machine learning, Context-aware networks, 5G networks and beyond at **Nokia Bell Labs** Massy/Nozay, France, and **University of Rennes**, Rennes, France
- SEP 2019 Master's (BAC+5) in MACHINE LEARNING, INFORMATION AND CONTENT (AIC) at **Paris-Sud University**, Paris Saclay, Orsay, France
- JUNE 2017 Master's (BAC+5) INTELLIGENT COMPUTER SYSTEMS (SYSTÈMES INFORMATIQUES INTELLIGENTS) at **University of Sciences and Technology Houari Boumediene**, Algiers, Algeria
- JUNE 2015 Bachelor's Degree in INFORMATION SYSTEMS AND SOFTWARE ENGINEERING (INGÉNIERIE DES SYSTÈMES D'INFORMATION ET DES LOGICIELS) at **University of Sciences and Technology Houari Boumediene**, Algiers, Algeria

## PUBLICATIONS

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1. Marie Line Alberi Morel, Illyne Saffar, Kamal Singh, Sid Ali Hamideche, and César Viho. "Improving User Environment Detection Using Context-aware Multi-Task Deep Learning in Mobile Networks". In: *IEEE Transactions on Cognitive Communications and Networking* 8.4 (2022), pp. 1665–1676
2. Sid Ali Hamideche, Marie Line Alberi Morel, Kamal Singh, and Cesar Viho. "Indoor-Outdoor Detection using Time Series Classification and User Behavioral Cognition". In: *2022 14th IFIP Wireless and Mobile Networking Conference (WMNC)*. IEEE. 2022, pp. 7–14
3. Soumeya Kaada, Sid Ali Hamideche, Chloe Daems, and Marie Line Alberi Morel. "Classification with Synthetic Radio Data for Real-life Environment Sensing". In: *2023 IEEE 97th Vehicular Technology Conference (VTC2023-Spring)*. IEEE. 2023, pp. 1–7
4. Sid Ali Hamideche, Marie Line Alberi Morel, Kamal Singh, and César Viho. "Federated Representation Learning for Indoor-Outdoor Detection in beyond 5G networks". In: *Workshop on AI-enabled Localization and Resource Allocation for Wireless@ Globecom2023*. 2023
5. Karthika Satheesh, Kamal Singh, Sid Ali Hamideche, Marie Line Alberi-Morel, and César Viho. "User Environment Detection Using Long Short-Term Memory Autoencoder". In: (in press, 2024)
6. Sid Ali Hamideche, Marie Line Alberi Morel, Kamal Singh, and César Viho. "Federated Representation Learning for Encrypted Application Type Classification in beyond 5G RAN". in: (in press, 2025)

## SKILLS

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- Python, PyTorch, Tensorflow, Hugging Face, NumPy, pandas, Matplotlib, Scikit-learn
- C/C++, OpenCV, Qt
- JavaScript, React, Node.js, HTML, CSS, Android Dev, REST API, JAVA, Git
- MySQL, MongoDB
- Linux, LaTeX, Inkscape, Blender, GIMP

## LANGUAGES

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- FRENCH: Fluent
- ENGLISH: Fluent
- ARABIC: native language

## INTERESTS AND ACTIVITIES

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Technology, Programming, Mathematics, Physics, Sciences  
Astronomy, Sports, Football, Travelling, Reading