Hoang Duy **Trinh** – CV

Telecommunication Engineer

Data Scientist

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Born on 27th February 1991, Padua, Italy

Education

Sep 16 – Present
PhD Student, Telecommunication Engineering, Polytechnic University of Catalonia, Barcelona, Spain
- Thesis: Data Analytics for Mobile Network Usage Patterns in 5G Networks powered by Energy Harvesting

Sep 17 – Feb 1
Visiting Academic, Dept. of Electrical and Computer Engineering, University of Maryland, College Park, US
- Resource Allocation for Energy Harvesting Communication Networks with Renewable Energy Sources

Oct 13 – Oct 15
Master's degree in Telecommunication Engineering, University of Padua, Italy
- Final Degree: 110 over 110
- Thesis: Robust Heart Rate Estimation through Wearable Photoplethysmographic Sensors
- Relevant Courses: Digital Signal Processing, Network Modeling, Wireless and Sensor Networks, Game Theory

Oct 10 – Jul 13
Bachelor's degree in Information Engineering, University of Padua, Italy
- Relevant Courses: Statistical Data Analysis, Data structures and Algorithms, Mathematical Analysis, Algebra, Signals and Systems, Control Theory

Relevant Work Experience

Sep 16 – Present
Research Assistant, CTTC, Barcelona, Spain
- Research Assistant in the Communication Networks Division of CTTC
- MarieSkłodowska-Curie Fellow in the EU H2020 MSCA SCAVENGE
- Machine Learning applied to Mobile Networks, 5G, LTE, Self-Organized Network

Oct 15 – Sep 16
IT Consultant, SideUp Reply, Milan, Italy
- Cloud-based Warehouse Management for E-commerce Companies (e.g. Costco, Alibaba's Tmall)
- Web Services Integration between Warehouse and Carriers
- Logistics Process Analysis and Development
- Dev Tools: Amazon AWS, Oracle Database, Cloud, Logistics

First Author's Publications

Apr 19
Classification of Mobile Services and Apps through Physical Channel Fingerprinting: a Deep Learning Approach
HD. Trinh, AF. Gambin, L. Giupponi, M. Rossi, P. Dini
IEEE Transactions on Mobile Computing (submitted)

Sep 18
Mobile Traffic Prediction from Raw Data Using LSTM Networks
HD. Trinh, L. Giupponi, P. Dini
2018 IEEE 29th Annual International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Bologna, Italy

Oct 17
Analysis and Modeling of Mobile Traffic Using Real Traces
HD. Trinh, N. Bui, J. Widmer, L. Giupponi, P. Dini
2017 IEEE 28th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC), Montreal, Canada

Skills & Knowledge

> AI - Deep Learning
- Sequence Models and time-series prediction: RNN, LSTM
- Classification: CNN
- Reinforcement Learning: Q-Learning

> Data Analysis and Statistics

> Python Libraries
- Analysis: NumPy, Pandas, Matplotlib
- Modeling: sklearn, Keras, TensorFlow, Pytorch

> Programming Languages
- Advanced: Python, MATLAB, Java
- Intermediate: R, C++, PL/SQL

> Wireless Communication
- Mobile Network: LTE, 5G
- Software-defined Radio

> DevOps Tools
- IDE: Jupyter NB, Eclipse, RStudio
- DB: Oracle, MySQL, MongoDB
- maven, git, SVN, Anypoint MuleSoft, Apache Mule

Projects

> LTE Data Acquisition
- Data Collection over-the-air from operative network cells for 5 months
- Real-time Web App Visualization
- Traffic Classification and Prediction using LSTM Networks

> SCAVENGE Data Challenge
- Data Challenge Organization

Certified Courses

> Coursera
- deeplearning.ai
- Google Cloud Platform

> Udacity
- Pytorch Scholarship Challenge from Facebook

Languages

> Italian - Mother Tongue

> English -Work Proficiency

> Spanish - Work Proficiency

> Vietnamese - Basic Proficiency