SELIM AMROUNI

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EDUCATION

COLUMBIA UNIVERSITY: Master of Science in Operations Research (Expected) — *New York, NY*, *Sep 2017 – Dec 2018*
- *Courses*: Deep Learning, Machine Learning, Reinforcement Learning (PhD class), Simulation, Stochastic Models, Optimization Models, Data Mining, Data Analytics
- *Teaching Assistant*: B9122 (PhD) Computing for Business Research – Grade students exams, Assist during recitations, Manage one-to-one advising in a class of 49 students
- *Course Assistant*: IEOR 4720 Deep Learning – Prepare TensorFlow code examples for lectures

IFP SCHOOL: Master of Science in "Energy & Markets" (Dual degree with CentraleSupelec) — *Paris, FR*
- Major in Economics applied to the Energy Sector — *Sep 2015 – Jun 2016*

CENTRALESUPELEC: *Diplôme d'Ingénieur Supélec*, equivalent to Master of Science — *Paris, FR*
- Major in Electrical Engineering and Applied Mathematics — *Sep 2013 – Jun 2016*

PROFESSIONAL EXPERIENCE

COLUMBIA UNIVERSITY NEW YORK PRESBYTERIAN: — *New York, NY*
Research Assistant – Data Science – Tatonetti Lab — *Sep 2018 – Present*
- Investigate using Python differential private models to enable anonymized clinical data sharing
- Diagnose a set of models used in clinical research to assess performance of private models

NYU LANGONE HEALTH: — *New York, NY*
Data Scientist (Part-time) — *Jun 2018 – Present*
- Continue the research to improve the current patient discharge prediction model using TensorFlow
- Explore the optimization of surgery scheduling and operating rooms utilization (Pilot Program)

Data Science Intern (Jun 2018 – Aug 2018)
- Conducted research to build a capacity model to predict hospital bed availability for the next 72 hours
- Gathered the different databases from the hospital services, set-up the intra-day data acquisition process, built visualizations, engineered features and developed Graphic User Interface
- Delivered a product built in Python enabling bed staff to manage over 30,000 inpatients per year

ENGIE INEO, Energy & Systems: — *Paris, FR*
Deputy Project Manager – Oil and Gas department — *Jul 2016 – Jul 2017*
- Budgeted the proposals during the tendering phases, average size: $300K – $12MM
- Performed web-scraping, API requests, data preprocessing and data analysis in Python

Lead Engineer Intern (Summer 2015)
- Designed the Polycom video conference architecture: Project Kaombo FPSOs (Total)

RESEARCH EXPERIENCE

COLUMBIA UNIVERSITY: — *New York, NY*
Deep Portfolio Management –Reinforcement Learning – Supervised by Prof. Shipra Agrawal — *Sep 2017 – Dec 2018*
- Implemented a Policy Gradient for portfolio management based on the (Jiang et al. 2017) paper
- Developed of the simulation environment using Python and the CNN using TensorFlow

Capsules Network (CapsNet) – Deep Learning – Supervised by Prof. Ali Hirsa
- Implemented CapsNet model using TensorFlow and Google Cloud GPU computing with S&P 500 data

DirectT Lab – Transportation Analytics – Supervised by Prof. Sharon Di
- Analyzed real-world data to forecast churning of drivers and to cluster their lifetime value
- Built of data pre-processing, analysis and computation for MDP model using GeoPandas

Spookie Kaggle Competition, Identify Horror Authors from Writings – Data Analytics
- Built of NLP features, predictive models test and selection using Python (Scikit-learn, nltk)

SKILLS

COMPUTER	Python (Numpy, Pandas, Keras, Scikit-learn, TensorFlow, Flask, Tkinter), Gurobi, SQL, Matlab, LaTeX
LANGUAGES	French (native language), Spanish (conversational)
ACTIVITIES	Independent side projects (DataCompetitions, Real-time gas stations price monitoring tool development, Song lyrics automatic generator), Co-founded & Managed Supeduc: a student union for private tutoring