CHU-CHENG FU

An enthusiast in Software Development and Data Science

@ charles@pluss.app   ☎ +46722398722   in chu-cheng-fu-053631148   ⌨ charlesfu4   % Homepage

EXPERIENCE

Full-Stack Engineer
Pluss

📅 Feb 2021 - current   📍 Stockholm

- **Full-stack engineering in digital market solutions with digital footprints decentralization**
  - Work closely with the product manager to realize use cases and requirements in the monetizing web-app
  - Plan new administrative processes with the CEO and implement them in the back-office app
  - Migrate and design database based on new business process flows
  - Tech stack:
    - React.js, Nest.js, PHP
    - PostgreSQL, AWS

Master Thesis
ABB

📅 Sep 2019 – Sep 2020   📍 Belgium

- **Automatic Machine Learning for Energy Forecasting**
  - Tailored AutoML pipelines for multiple time-step ahead energy data prediction
  - **Saved up to 70% of time** comparing to traditional ML methods
  - Devised advanced algorithm for measuring uncertainty of ensemble tree-based ML models
  - Data sets:
    - London Smart meters data set
    - Power generation data set from ABB Lüdenscheid Solar Power plant
  - Tech stack:
    - Python, AWS

OPEN-SOURCE PROJECT

Auto-sklearn

📅 Mar 2020-Sep 2020   📍 Github 1, 2

- **Contributed to an open-source automatic machine learning software package, Auto-sklearn**
  - Developed and extended multi-output regression
  - Identified and repaired bugs in evaluation pipelines

AWARDS

Datathon 2020: The best Visualization Team
KU Leuven

📅 Feb 2020   📍 Belgium

- **Data Science hackathon competition involving 40 teams**
  - Created an interactive heat map displaying pollution in the Leuven city, Belgium
  - Utilized a 3D scatter plot to demonstrate pollution

EDUCATION

Double M.Sc. Energy for Smart Cities
KU Leuven, KTH Royal Institute of Technology

📅 Aug 2018 – Sep 2020   📍 Belgium, Sweden

- **Master Thesis: 16/20**
- **Elective courses in AI/ML master's program:** Analysis of Large Scale Social Network, Big Data Analytic Programming, Data and Statistical Modeling, Data Mining, Deep Learning in Data Science, Machine Learning

B.Sc. Electrical Engineering
National Cheng Kung University

📅 Sep 2012 – June 2017   📍 Taiwan

- **Outstanding student 2014(Ranked top 5%)**
- Computer Science courses: Computer Organization, Operating Systems, Software Engineering, System Analysis and Design Theory, Web Programming, Open-Source Software Development

SELECTED PROJECTS

Big Data Analytic Programming
KU Leuven

📅 Oct 2019 - June 2020   📍 Belgium

- Improved efficiency of Apriori text mining by SIMD in C
- **Designed a 23GB data scale** Hadoop MapReduce application of raw GPS data for Los Angeles taxi trip analysis in Java
- **Boosted up to 10% accuracy** of online spam filter classifiers by realizing advanced approximation algorithms in Java
- **Saved up to 50% of prediction time** of KNN image classifier by implementing product quantization algorithm in Java

Verification of Super Convergence in Convolutional Neural Network
KTH Royal Institute of Technology

📅 March 2019 - June 2019   📍 Sweden

- Tested and realized super convergence in DNN for multiple image classifiers published by US Navy lab
- **Gain up to 5% on testing set accuracy** and **improved 30% on training time efficiency**

TOOLS AND KNOWLEDGE

Java   JavaScript   Python   C   R   Git   Hadoop
PySpark   SQL   AWS   MongoDB   Node.js   Docker
React   Web development   Data Mining
Machine Learning

LANGUAGES

English
Mandarin
Swedish