

YUNG, Hong Kiu Bosco

(Bosco Yung)

Email: boscohky@gmail.com
Website: <https://www.ncac.torun.pl/~byung>

Profile

An experienced **machine learning engineer** / **data scientist** familiar with Python programming especially in using numpy, scipy, pandas, matplotlib, scikit-learn and Keras (with TensorFlow backend).

Work Experience

■ Machine Learning Engineer, Jaumo GmbH Jan 2018 – Present

- Enhancement of app user experience and fraud detection by machine learning methods
 - Identification of duplicate accounts by analysis of image features and user profiles.
 - Detection of NSFW photos uploaded by users with deep learning models.
 - Explanatory Data Analysis of 30 million users to understand their preferences and behaviours.
- Implementation of machine learning services
 - Working with the backend team using Kafka, Kubernetes etc. for scalable deployment.
 - Preparations of testing services during development phase to ensure smooth production.
 - Code maintenance and documentation on GitLab.

■ Postdoctoral Researcher, Nicolaus Copernicus Astronomical Centre Oct 2015 – Dec 2017

- Application of machine learning in stellar classification research
 - Manipulation of huge tabular data sets including data cleaning and preprocessing
 - Visualization of data with 2D or 3D scatter plots, 1D or 2D histograms, line plots, etc.
 - Classification of 2 million sources (samples) with >50 photometric band data (features)
 - Classifiers (e.g., Logistic Regression, Random Forest), clustering methods (e.g., K-Means, DBSCAN), dimensionality reduction (e.g., PCA), cross-validation, etc.
- Development of data reduction software in Python
 - Parameters extraction (e.g., velocity, integrated flux) from 1D line spectra in ASCII and FITS format
 - Sub-routines for semi-automatic spectral data reduction with the astronomical software HIPE

■ Lecturer, Faculty of Science, The University of Hong Kong Sept 2013 – Aug 2015

- Teaching introductory and general science courses for undergraduate students
 - Preparations of lectures and tutorials
 - Organization of science talks and workshops
 - Supervising educational projects

Kaggle Machine Learning Competitions

- **Statoil/C-CORE Iceberg Classifier Challenge** (Jan 2018)
 - Final ranking: top 10%, “Bronze Medal”
 - Skills: binary classification, image recognition, convolutional neural network, Keras, etc.
- **Porto Seguro’s Safe Driver Prediction** (Nov 2017)
 - Final ranking: top 31%
 - Skills: binary classification, data imputation, one-hot encoding, XGBoost, etc.
- **Personalized Medicine: Redefining Cancer Treatment** (Oct 2017)
 - Final ranking: top 15%
 - Skills: multi-class classification, Natural Language Processing, dimensionality reduction, etc.

Education

- **Ph.D. in Astrophysics** (Aug 2013), Department of Physics, The University of Hong Kong
- **Master of Philosophy in Astrophysics** (Aug 2010), Department of Physics, The University of Hong Kong
- **Postgraduate Diploma of Education** (Aug 2008), Department of Education, The University of Hong Kong
- **B.Sc. in Physics and Astronomy** (Aug 2007), Department of Physics, The University of Hong Kong

Computing Skills

- Programming
 - **Python** (7 years): data analysis and machine learning (see work and Kaggle experience).
 - **Bash** (7 years): file management under Linux environment
 - **MATLAB, GNU Octave** (2 years): matrix operations and data visualization
 - **C** (1 year): scientific calculations in some research projects before switching to Python
- Operation systems
 - Linux, macOS (OS X), MS Windows
- Others
 - LaTeX, Git, HTML, Cakewalk (MIDI sequencer)

Publications

- 9 refereed publications (5 as the first author); 4 non-refereed publications (2 as the first author)

Conferences and Workshops

- Participated and contributed in 7 international conferences and workshops

Languages

- English (fluent), Cantonese (native), Mandarin Chinese (basic)

(Updated 6 Feb 2018)