DUCK HA HWANG

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Technical Skills

- Languages: Python (Expert, 3 years), MATLAB (Expert, 3 years), C++ (Advanced, 4 years), Java (Expert, 3 years), R (Skilled, 1 years), SQLite (Skilled, 1 years), QT (Skilled, 2 years)
- Libraries: OpenCV, TensorFlow, scikit-learn, pandas, numpy

Work Experience

Computer Vision Engineer / Machine learning Engineer September 2015 to March 2017

BIO-AND NANO-PHOTONIC LABORATORY (OZCAN GROUP) UCLA GRADUATE STUDENT REASEARCHER

PORTABLE COST- EFFECTIVE 2-D MICROSWIMMER IMAGING PLATFORM FOR SPERM HEALTH ANALYSIS

- Reconstructed hologram images into a visually recognizable object image using Fourier Transform Propagation and Auto-focusing (Tamera coefficient).
- Built the deep neuron networks to achieve 99% accuracy in label-free living cell classification.
- Designed multi-frame track algorithm for multi-target using dynamic programming that employed the Current Statistical model.

BIO-GAME

- Formulated and developed the newest version of a game designed to teach teenagers how to identify viruses in blood samples.
- Integrated Pedagogical theory with data analysis employing T-test of Microsoft Excel and Python to predict each student's performance
- Evaluated 5800 Korean students' performance to identify student learning patterns and built a pipeline to automate data extraction from the data warehouse to generate analytics results.

Software Engineer October 2013 to October 2014

PELLUE INC., SEOUL, SOUTH KOREA

DAY.LY ANDROID APPLICATION

- Programmed voice support and news services for Android app using Java, catering toward busy lifestyles.
- Involved the writing SQL Queries and Joins; fixed bugs to add functionality and gave a professional look to the app.

Project Experience

Finding Donors for CharityML June 2017

- Compared supervised algorithms to accurately model individuals' incomes using data collected from the 1994 U.S. Census.
- Found the best algorithm and optimize XGBoost algorithm to predict individuals' income from the Census data.

UCLA - Pattern Recognition & GRAPHS&NETWORK FLOW September to December 2016

- EXPERIMENTS ON DEEP LEARNING WITH CONVOLUTION NEURAL NETWORKS: Trained and tested a typical convolutional neural network (CNN) structure in a task of classifying 10 object classes.
- PCA AND FLD FOR ANALYZING HUMAN FACES AND DETECTION BY BOOSTING TECHNIQUES: Developed ASM and AAM model for face reconstruction.
- FACE SOCIAL TRAIT AND POLITICAL ELECTION ANALYSIS BY SVM: Showed the correlations between facial attributes, social attributes, and election outcomes.

Education

MASTER OF SCIENCE (M.SC.) IN ELECTRICAL ENGINEERING, COMPUTER VISION AND MACHINE LEARNING March 2017

University of California, Los Angeles

BACHELOR OF SCIENCE (B.SC.) IN ELECTRONIC ENGINEERING, SIGNAL & SYSTEM August 2013

Kyonggi University*, Suwon-si, Gyeongi-do, Republic of Korea, GPA: 4.10 / 4.5 (Major GPA: 4.42 / 4.5)*

UDACITY - MACHINE LEARNING ENGINEER NANODEGREE March to June 2017 (On going)

Make Predictive Model, Co-Created by Google

DAT101X: MICROSOFT PROFESSIONAL ORIENTATION: DATA SCIENCE April 2017

Course of study offered by Microsoft, an online learning initiative of Microsoft Corporation through edX.