Tianjian HUANG

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EDUCATION

The Chinese University of Hong Kong, Shenzhen (CUHK-SZ) Sep 2017 - Present

Bachelor of Engineering | Computer Science and Engineering | GPA: 3.72/4.00, Ranking: Top 5% Shenzhen, China

Academic Highlights: Calculus, Linear Algebra, Discrete Mathematics, Probability and Statistics, Digital Logic and Systems, Programming Paradigms (C++), Operating System (C), Computer Architecture (MIPS), Programming Methodology (Python)

University of California, Berkeley Jun 2017 - Aug 2017

Summer School CA., U.S.A

Academic Highlights: The Foundations of Data Science (Grade A)

RESEARCH

Educational Process Mining (EPM) (https://riss.ri.cmu.edu/research_showcase/2020-posters/) Jun 2020 – Aug 2020

Research Scholar | Advisor: Dr. Jack Mostow | Robotics Institute Summer Scholar (RISS) program (https://riss.ri.cmu.edu/)

- Analyzed the log data of RoboTutor (an Android tablet tutoring APP) with EPM, and summarized children-tutor interaction behavior patterns
- Converted RoboTutor JSON log data to CSV event logs with Python and Excel, created process models for RoboTutor's log data with Disco (a process mining tool), and integrated the process models with event log data

Mini Auto Race Car (https://github.com/MARC-Project, 11th CUHKSZ Undergraduate Research Award**)** Jun 2019 – Present

Project Leader

- Developed a Linux environment for running Robot Operating System (ROS) on Raspberry Pi 3 Model B, and tailored ROS packages to increase the image processing speed from 5FPS to 10~15 FPS
- Set up a simulation platform using Gazebo simulator, and constructed a 3D testing car model in Gazebo using URDF
- Developed visual navigation algorithms on a real hardware platform in order to conduct global path planning using monocular vision and Quick Response (QR) codes
- Oversaw project progress, and managed the project on GitHub

Analytical Research and Server Maintenance Practices Oct 2018 - May 2019

Intern | Institute for Data and Decision Analytics, China

- Contributed to build a system, which analyzes Wi-Fi traffic patterns in public areas (like libraries), and used Bayesian estimation to calculate the probability of students conducting academic or recreational activities
- Conducted an experiment and a survey to find out "distribution of internet usage" (prior distribution) and "distribution of data when studying/playing" (likelihood); cleaned and processed all acquired data
- Performed routine maintenance of intranet servers; refactored backend code in Python to enhance the website stability

ACADEMIC PROJECTS

CSC4001 Software Engineering (https://github.com/CSC4001/Campus-Food-Ordering-System) Mar 2020 - May 2020

Group Project | Project Leader

- The project was to build a website for ordering food delivery services with Flash, Vue.js and SQLite
  Enabled role-based access control by defining designated rules and management systems for customers and business admins, and realized secure storage of trades
- Oversaw team progress, and motivated team members to complete assigned tasks

CSC1002 Computational Laboratory Mar 2018 - May 2018

Individual Project

- The project was to build a flight chess game for up to four PC players (C++)
- Integrated strategic analysis and optimization logics to find the optimal move among all possible ones, based on a specific valuation function; implemented the KNN algorithm in Python for digit recognition, and achieved an accuracy of 96%
- Completed a mini project concerning the interactive data visualization in Python with Bokeh

AWARDS AND HONORS

The 11th Undergraduate Research Award, CUHKSZ 2019 - 2020

Dean's List, School of Science and Engineering, CUHKSZ 2017 - 2019

Class C, The Academic Performance Scholarship (11/443), CUHKSZ 2017 - 2018

SKILLS AND PROFICIENCIES

Programming: C++, ROS, Python, HTML, CSS, JavaScript, MySQL, Disco, ProM

Languages: English (*Proficient*), Chinese (*Native-speaker*), Cantonese (*Conversational*)

English: TOEFL 106 (R28, L29, S23, W26), GRE 335 (V165, Q170, AW 3.0)