

YUAN CHEN

Tel: (852) 68107676, Email: constantchen525@gmail.com

Github: github.com/Constannnnnt

EDUCATION

Hong Kong University of Science and Technology, Hong Kong 09/2014-Present
B.Eng. in Computer Science and Engineering and Mathematics (CS-Track) (Double Major)

David R. Cheriton School, University of Waterloo, Waterloo, Canada 09/2016-01/2017
No Degree, Exchange student. in Computer Science

PUBLICATION

Zhao, X., Wu, Y., Cui, W., Du, X., **Chen, Y.**, Wang, Y., Lee, D. and Qu, H. (2017). SkyLens: Visual Analysis of Skyline on Multi-Dimensional Data. *IEEE Transactions on Visualization and Computer Graphics*, pp(99), pp.1-1. Proceedings of IEEE VAST 2017.

RESEARCH EXPERIENCE

Research student at Undergraduate Research Opportunity Program, HCI Group, HKUST

- **WellVR-Multimodal Interaction with Sensor Fusion in AR/VR:** proposed a VR mobile system consisting of gesture recognition by Welle and object motion simulation in mobile devices, supervised by Prof. **Xiaojuan MA** 06/2017-Present
 - Implemented a neural network on GoogleNet to classify gesture images and improve accuracy
 - Devised a probability model to approximately recognize gestures and thus improve efficiency
 - Employed gaze and eye-tracking for object selection to enrich approaches for interaction

Research student at Undergraduate Research Opportunity Program, VisLab, HKUST

- **SkyLens-Visual Analysis of Skyline on Multi-Dimensional Data:** proposed a visual analytic system aiming at revealing the superiority of skyline points from different perspectives and at different scales to aid users in their decision-making, supervised by Prof. **Huamin QU** 01/2017-08/2017
 - Developed the visual system, Skylen Vis, by using D3.js and Vue.js
 - Implemented a decisive subspace algorithm to determine dominant subspaces
 - Implemented multi-dimensional attributes comparison and Force layout algorithm
- **IEEE Vast Challenge 2016:** proposed a visualization system to analyze employee movement and activity and building environment, supervised by Prof. **Huamin QU** 06/2016-08/2016
 - Designed and implemented the cross-interaction system using Python, D3.js and JQuery
 - Visualized motion activities by heat map, flow chart and time-dependent bar chart
 - Identified the 10 potential patterns and 8 unusual events based on the activities' data
- **Visualization of Rumor Propagation in Wechat:** visualized the relation between rumor propagation and territoriality in social media, supervised by Prof. **Huamin QU** 02/2016-06/2016
 - Simulated rumor propagation in Wechat and visualized it with time-dependent propagation map
 - Researched two rumor spreading models – susceptible-infected-susceptible(SIS) model and susceptible-infected-refractory(SIR) model in propagation patterns
- **IEEE VGTC VPG International Data-Visualization Contest 2015:** identified the trends in majors and major suitability among ACT examinees, supervised by Prof. **Huamin QU** 06/2015-08/2015
 - Embedded time-dependent data in the ThemeRiver to study the trend of majors
 - Analyzed the examinees' data using Tableau and explored potential patterns

WORK & INTERNSHIP EXPERIENCE

Software Summer Intern at Hong Kong Applied Science and Technology Research Institute

06/2016-08/2016

- Researched the virtual container technology, Docker and embedded the project's components on Docker images
- Built Docker images on Jira with MariaDB, and Redmine and GitLab with PostgreSQL and tested all relevant features and procedures for project development
- Prepared the technical documentation for future review and development

CAPSTONE PROJECT

Gesture Control-Based Game, Final Year Project, HKUST, supervised by prof.Xiaojuan MA

06/2017-Present

- Performed literature survey about gesture detection and recognition, including Doppler effect sensing
- Analyzed the user habits to design gestures and test gesture-mapping control to improve playability
- Implemented dynamic time warping to recognize simple gesture motion
- Improved the accuracy by adding multiple noise filters, including the particle filter

VOLUNTEER & EXTRACURRICULAR EXPERIENCE

- ***Member*** of the **Microsoft Student Club, HKUST Session** 10/2016-02/2017
- ***Front-end Developer*** at **The Base, HKUST** 02/2015-08/2016
 - Took administration responsibility and contributed to the website development
- ***Mentor*** at **Peer Mentor Program, MSSUG, HKUST** 08/2015-04/2016
 - Organized outreaching activities to help freshmen to efficiently adapt to university life
 - Helped freshmen to handle academic and daily life problems during a year
- ***Internal Vice President*** of the **Chinese Folk Art Society, HKUSTSU, HKUST** 03/2015-03/2016
 - Took responsibilities for all internal affairs, such as arranging meetings and organizing activities to enhance teamwork
 - Served as P.I.C. in some functions, including the inauguration ceremony and cuisine competition
- ***General Member*** at **Dean's Club, School of Engineering, HKUST** 09/2014-09/2015
- ***Volunteer*** at **Oriental Connect International Volunteer Association** 12/2014-01/2015

LANGUAGE & TECHNICAL SKILLS

- **Language:** Mandarin(native), English(professional), Cantonese(advanced)
- **Technical Skills:**
 - Programming Languages: Python, JavaScript, MATLAB, C/C++, C#, SQL, Bash
 - Frameworks: Vue.js, D3.js, three.js, .NET(MVC), Flask, Node.js, Tensorflow
 - Other: Docker, Latex, GIT

AWARDS & SCHOLARSHIPS

- ***Dean's List*** of the **HKUST** 09/2017
- ***Reaching Out Award*** from **HKSAR Government** 07/2017
- ***Champion*** of the **HealthCare** division of **HackUST** 04/2017
- ***University Admission Scholarship*** from **HKUST** 09/2014-09/2015