

JINGRAN ZHOU

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EDUCATION

University of Hong Kong, Lung Fu Shan, HK Sep 2015 – May 2019 (Expected)
B.Eng. in Computer Science, GPA: 3.89/4.3, Rank: 6/111 (Top 5%)

- Major GPA: 4.01/4.3; Minor: Statistics
- Key coursework: Algorithms; AI; Software Engineering; Statistical Learning; Probability and Statistics; Linear Algebra; Discrete Mathematics; Functional Programming; Database; OS; Networks

Princeton University, Princeton, NJ Jan 2017 – May 2017
Visiting Student in Computer Science, GPA: 4.0/4.0

- Coursework: Algorithms & Data Structure; Programming Systems; Multivariable Calculus; Creativity, Innovation and Design

WORK EXPERIENCE

J.P. Morgan Jun 2018 – Aug 2018
Summer Technology Analyst in Corporate & Investment Bank

- Conducted full-stack development of a web monitor with a responsive design and cross-browser compatibility, tracking the pricing of millions of financial instruments.
- Handled software testing on more than six modules used daily by international clients.
- Reduced time of queries to global-scale databases from two minutes to five seconds on average.
- Led a 6-person team designing an end-to-end system using LSTM with firm-wide scalability for predictive monitoring of business processes.

CLP Group Jun 2017 – Aug 2017
Data Science Intern in Centre of Excellence

- Developed an ARIMAX model for time series forecasting of readings from distribution boards throughout Hong Kong and built an anomaly detection system to predict cable faults.
- Created three inclusive live dashboards used by more than 2,400 field electrical engineers.
- Cleaned, classified and analyzed three years of internal electricity records.

RESEARCH EXPERIENCE

Data Engineering Group, HKU Dec 2018 – Present
Research Assistant, Supervised by Prof. Benjamin C.M. Kao

- Developed a question-answering system for legal information extraction and retrieval.

Systems and Networking Group, HKU Jan 2018 – Mar 2018
Research Assistant, Supervised by Dr. Heming Cui

- Conducted performance analysis on multiple time-consuming functions in the libpmem library.
- Implemented and carried out persistent-memory experiments with PMDK.

3D Vision and Action Lab, HKU Sep 2017 – Feb 2018
Research Assistant, Supervised by Dr. Jeffrey Allen Saunders

- Constructed three large-scale virtual reality city scenes with Unity and SteamVR for cognitive experiments on human navigational abilities.

Sleep Research Clinic & Laboratory, HKU Jul 2017 – Aug 2017
Research Assistant, Supervised by Dr. Wanqi Sun

- Computed 18 indicators from raw results of Balloon Analogue Risk Task (BART) experiment.
- Built a Bayesian Variability Model to estimate experiment subjects' sleep time variability.

TEACHING EXPERIENCE

COMP1117 Computer Programming, HKU Sep 2018 – Present
Teaching Assistant

- Supervised 16 students and closely tracked their tutorial performance throughout the semester.

University Express Jun 2016 – Aug 2016
Founder & Teacher

- Provided mock university entrance interviews and relevant teaching materials for high school students and held a concomitant seminar with more than 100 participants.

SELECTED PROJECTS

- CS Graduate School Admission: Analysis and Prediction** (*Python, R | Team*) Winter 2018
- Analyzed CS graduate admission records in the US (2009-2016) to predict admission decisions.
- Analogia: Story Understanding by Analogy** (*Python | Team*) Fall 2018
- Developed a linguistic model that predicts user preferences by word-level analogical reasoning.
 - Implemented a story matching model evaluating semantic similarity between two stories.
- Reversi: Strategy Board Game with AI Opponent** (*Python | Individual*) Winter 2017
- Built game logic, GUI, and an AI player based on alpha-beta pruning with an evaluation function that effectively integrates 4 different heuristics.
- AirGest: Robot Gesture Controller** ^[video] (*C++ | Team*) Fall 2017
- Created a controller to direct the horizontal movement of a four-legged robot by recognizing four types of hand gestures and making corresponding REST API calls over Wi-Fi.
- Tutoria: University Online Tutoring Platform** (*Python/Django | Team*) Fall 2017
- Developed user review mechanisms with anonymity support, a booking management system, a fuzzy search module with auto-completion, and a digital wallet with transaction functionality.
 - Scraped information of 58 courses from Department of Computer Science's website.
- iShell: A Linux Shell** (*C | Individual*) Spring 2017
- Built a lightweight Linux shell from scratch that makes key facilities of the operating system available to interactive users, consisting of a lexical analyzer and a syntactic analyzer.
 - Wrote highly modular programs to handle external and built-in commands, input/output redirection, signals, and errors.
- Optimized Large Integer Addition Module** (*C, x86 Assembly | Individual*) Spring 2017
- Developed a module for adding very large integers that outperforms GCC by 400%.
- Big Two: Multiplayer Online Card Game with Chat Room** (*Java | Individual*) Fall 2016
- Designed and implemented non-blocking communication mechanisms through Sockets, a context-aware card prompts feature, and a Swing GUI.

INSTITUTIONAL SERVICE

- Faculty of Engineering, HKU** Sep 2017 – May 2018
Peer Mentor
- Helped freshmen in Faculty of Engineering adapt to new learning environment.
- Academic Advising Office, HKU** Sep 2016 – May 2017
Morrison Hall Residential Student Advisor
- Engaged in academic symposium and advised juniors on academic planning and hall activities.
- Admission and Academic Liaison Section, HKU** Sep 2016 – Present
Student Ambassador
- Wrote admission materials that received more than 10,000 views on social media.
 - Received international guests, led campus tours and held presentations about HKU student life.

SKILLS

Programming: Java, Python, C/C++, HTML/CSS, JavaScript, Haskell, SQL, R, MATLAB, C#, PHP, Shell, x86 Assembly, Swift

Framework/Tool: Git, Spring Boot, Bootstrap, Django, Team City, UML, Maven, Unity, CoreNLP, PyTorch, LaTeX, Tableau, Power BI, Arduino, SketchUp, Leap Motion

Language: Mandarin Chinese (native), English (professional), Cantonese (basic)

Certification: Machine Learning by Stanford University on Coursera

AWARDS

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| HKU Faculty of Engineering, Dean's Honors List 2017-18 | 2018 |
| Interdisciplinary Contest of Modelling, Honorable Mention (<i>outperform 75% of 8085 teams</i>) | 2017 |
| HKU Faculty of Engineering, Dean's Honors List 2015-16 | 2016 |
| CLP, Powering a Sustainable Generation Scholarship (<i>1 of 2 awardees in Engineering</i>) | 2016 |
| Tsinghua University, City Change Maker 1 st Runner-up | 2016 |
| China Song Ching Ling Foundation Scholarship (<i>sole awardee from Yunnan Province</i>) | 2015 |