HUSSAIN Wasif Latif

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Education

The University of Hong Kong, *Bachelor of Engineering.*	Hong Kong, SAR
	Class of 2025.

Major: *Computer Science,* **Minor:** *Finance,* **Focus:** *Financial Computing.*

Awards: HKU Foundation Entrance Scholarship **(Full Tuition).**

Roles: HKU Student Ambassador, HKU Equal Opportunity Ambassador.

Highlight Courses: Data Structures and Algorithms, OOP & Java, Computer Programming II in C/C++, Linux Systems and Shell Scripts, Full-Stack Development Bootcamp by Angela Yu

Work Experience

LITRO International Limited, *Full Stack Developer.*   *Mid-July 2022 – Aug 2022.*

- **Built a RESTful API server and Database** using Flask, SQLite, SQL Alchemy, Jinja2, on Python for handling all backend services for websites, as well as for storing data and viewing as HTML pages in production environment.
- **Web Scraping Alg** for Facebook and Openrice using Python and required libraries and linked to API server to store the data to DB.
- **Automated System** using OS, Flask App branching, and logging modules from Python to create a fully automated server incorporated with a task-queue mechanism to store new user requests(jobs), and scrape data as per the requested jobs at regular intervals.

Key Direction Limited Consultancy, *IT Summer Intern.*   *June 2022 – July 2022.*

- **Data Analysis and Mining** for Singapore Railways LRT, to analyze maintenance of systems and handle maintenance data.
- **Automation Processes** to handle large data and filter to sequential storage files using Python and related libraries.
- **Website Development** for KDAS Limited using HTML, CSS, JS, Bootstrap and React and an interactive interface for client and host interactions.

Laidlaw Foundation HKU & UCL, *Laidlaw Research Scholar 2022.*   *Mar 2022 – Sept 2023.*

- **Detailed Research and Analysis** on the development and state of the Point-of-care diagnostics industry under Dr. Sammer Ul Hassan, Professor at HKU Mechanical Engineering Department.
- **Use of financial models** to analyze the financial state of POC industry to produce smart solutions for commercialization of POC.
- **Hands-on research experience** on building POC technology under the HKU Mechanical Department to test proposed solutions.

Highlight Projects

A RESTful API Server *for Facebook, Instagram, and Openrice scraping.*   *View Git Repo*

- **Developed** a Flask App using python, and libraries such as selenium, pandas, lxml, beautifulsoup and several python modules.
- **Incorporated** Jinja2 with CSS, Bootstrap, JavaScript and HTML to make an interactive server platform to handle user requests.
- **Built** task-queue managers to connect backend to frontend and take in user requests from frontend, and store in backend, as well as inspect backend queue for pending tasks and perform scraping in bulk at once to avoid continuous server traffic.

Interactive Tetris, *using only C++ and Bash Terminal*   *Visit Git Repo | Watch Demo*

- **Implemented** multi-threading to allow for continuous dropping of blocks in an otherwise static bash terminal.
- **Used** intricate file system to store game data and also allow users to reload saved game and continue playing from last checkpoint.
- **Integrated** classes to store shapes of Tetris blocks and to rotate them in real-time in-game and produce immediate response without bash shell refresh.

Notakto AI, *a human vs. computer 3-board Tic-Tac-Toe where the computer will always win*   *Visit Git Repo | Watch Demo*

- **Incorporated** dynamic programming ideas to develop strategies to aid computer in detection of win conditions.
- **Developed** special conditioning functions to deal with unique user moves, and to tackle around them to secure win conditions.

Research Paper, ***A Step towards Smart Innovation: Development and Analysis of Point-Of-Care Devices***   *View Paper-in-Work*

- **Analyzed** the Point-of-care industry from a technological standpoint to deduce the risks, issues, and developments.
- **Investigated** the financial growth of the industry using financial analysis models to extrapolate future growth.
- **Deduced** potential growth opportunities which support both the technological and financial growth of the industry.

Notable Awards and Activities   *See More at: My Web Portfolio*

HKU Foundation Scholarship*, Full Tuition.*

Scholarship covering Full Tuition for the entire study period.

Edexcel Higher Achiever's Award*, Top 113 out of ~230,000 Students Nationwide.*

For outstanding academic achievement in A' Level Examinations **(4 A*)** and IGCSEs Examinations **(8A*)**.

HKU Student Ambassador (since 2021)

Represent HKU at major events, attend school visits and social activities as a representative of HKU for the betterment of society.

HKU Equal Opportunities Ambassador (since 2022)

Work for equal opportunities at workplaces and society; training and arrange events to promote equal opportunities for minor ethnicities.

Skills

Core:	Python, JavaScript, Java, C, C++, Shell, Linux.
Skills:	HTML5, CSS3, Flask, SQL, SQL Alchemy, jQuery, React, React Native, Jinja2, Django.