

Sabyasachi Purkayastha

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Education

The University of Hong Kong, *Bachelor of Engineering*

Hong Kong SAR

Major: Computer Science, Minor: Finance

Class of 2024

Awards: HKU Foundation Entrance Scholarship (Full Tuition)

Positions: Co-President UNICEF HKU, HKU Student Ambassador, HKU Equal Opportunity Ambassador

Highlight Courses: Data Structures and Algorithms, Discrete Mathematics, Computer Organization, OOP & Java, Modern Technologies on World Wide Web, Artificial Intelligence: Utopia or Dystopia

Work Experience

GrinBean Limited, *Full Stack Developer*

Dec 2021 – Jan 2022

- **Recreated** the legacy UI system using Vue and subsequently enhanced UX through redesigning the dashboard using chart.js for data analytics and visualization.
- **Seamlessly** developed data pipeline for iot device and server using express.
- **Contributed** to the text-based data mining and information extraction to train and modify the data driven AI model to achieve less recourse and greater efficiency.

HKU Business School, *Research Assistant*

Nov 2021 – Jan 2022

- **Conducted** analyses of datasets regarding a research paper of HKU Business School.
- **Substantially** increased the speed of data extraction by implementing an algorithm that recognized the type of data required and automatically provided that for the research project.

QuokkaHR, *Software Developer*

Nov 2021 – Dec 2021

- **Designed and developed** features using React to show attempts of team members so they can analyze their weaknesses.
- **Revamped** the main page containing all available projects using React to help project managers differentiate completed projects from the incomplete ones.
- **Wrote tests** for authentication, authorization, and performed UAT to optimize the performance of the existing platform

Highlight Projects

See more at: [Shoh4g.github.io](#)

Sort-It, *A Sorting Visualizer*

- The project, with the aid of visualization, demonstrates how different sorting algorithms work behind the scenes.
- Made using HTML5, CSS3 and JS.
- [Visualize the project here](#)

BigTwo, *A Card Game made in JAVA with multiplayer support on the network*

- Implemented OOP approach to handle complex game mechanisms and developed a JAVA GUI for the client.
- Multithreaded approach to handle networking, JAVA sockets to handle network multiplayer and proper use of exceptions for error handling

PlayandLearn, *an educational text-based game using C++*

- Used dynamic memory management to display questions in the rapid fire round based on user input.
- Created a make file to organize code compilation and increase efficiency as well as allowed users to load previous data using FILE I/O.

Personal Portfolio, *a responsive single page portfolio which also includes contact form and Sass sources*

- [Visualize the project here](#)

Notable Awards and Certifications

HKU Foundation Scholarship, *Full tuition*

Scholarship covering entire tuition for entire study period.

GOLDMAN SACHS Engineering Virtual Program

Used Kali Linux and Hash cat to crack a leaked password database which were using Secure Hash Algorithm (SHA) and Message Digest (MD5).

JPMORGAN CHASE and CO Software Engineering Virtual Experience

Built an interface with a stock price data feed and displayed data visually to traders.

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 (**7A* and 1A**)

Skills

Core: Python, JavaScript, Java, C/C++, Shell, Hashcat, Linux/Unix/Kali Linux

Web & Database: HTML5, CSS3, EJS, jQuery, React, Vue, chartjs | NodeJS & Express | MongoDB, Mongoose SQL