Sabyasachi Purkayastha

+852 5697 0024| Web Portfolio |u3572970@connect.hku.hk

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 greater efficiency.

HKU Business School, *Research Assistant.*   *Nov 2021 – Jan 2022*

- **Conducted** analyses of datasets regarding a research paper of HKU Business School.
- **Increased the speed of data extraction by 60%** via implementing an algorithm that recognized the type of data required and instantly provided that for the 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 project page using React to aid project managers differentiate between completed and incomplete projects.
- **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.
- Produced using HTML5, CSS3 and JS.
- *View the project.*

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

- Implemented OOP approach to conveniently handle complex game mechanisms and developed an interactive JAVA GUI for the client.
- Utilised a multithreaded approach to handle networking and JAVA sockets to handle network multiplayer.
- Effectively used exceptions for error handling and made proper comments and documentations for all available classes and objects.

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.

Notable Awards and Certifications

HKU Foundation Scholarship*, Full tuition.*

Scholarship covering full 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***).

Certificate Of Recognition*, Ministry of Environment, Forest, and Climate Change of the People's Republic of Bangladesh.*

For conducting multiple impactful activities regarding climate change and global warming.

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.