## 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 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.qithub.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.

Used React to create 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.