

# SM NAZIM UDDIN SHOIKOT

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## EDUCATION

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### The University of Hong Kong, Hong Kong

Sep 2017 – Jun 2021

Bachelor of Engineering in Computer Science

First Class Honors GPA 3.66/4.30

- **Selected Coursework:** Data Structures and Algorithm Analysis, Machine Learning, Applied Deep Learning, Communication and Networks, Object-Oriented Programming and Java, World Wide Web Technologies

### Purdue University, West Lafayette, USA

Aug 2019 – Dec 2019

Bachelor of Science in Computer Science – Exchange Program

GPA 3.74/4.00

- **Selected Coursework:** Design, Analysis, and Implementation of Algorithms (Graduate level), Operating Systems, Software Engineering, Entrepreneurship and Innovation

### Mastermind English Medium School, Dhaka, Bangladesh

Jul 2014 – Jun 2016

International Advanced Levels

- **Achieved 5 A\*s** in Mathematics, Physics, Chemistry, Accounting, and Law

### Mastermind English Medium School, Dhaka, Bangladesh

Jul 2012 – Jun 2014

International GCSE

- **Achieved 6 A\*s** in Mathematics, Physics, Chemistry, Accounting, Economics, Pure Mathematics, and **2 As** in English Language and Bengali.n

## INDUSTRY EMPLOYMENT AND EXPERIENCE

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### Kodifly Ltd

Hong Kong

Artificial Intelligence Engineer

Oct 2022 – Present

- Created an end-to-end system to facilitate pedestrian and vehicles tracking in real-time according to customer requirements (**PaddlePaddle, OpenCV, Python**) (*Ongoing*)
- Participated in data preprocessing, training, and fine-tuning of various computer vision models (**YOLO, CNN, RCNN**)
- Researched latest technologies used for object detection, and drafted related proposals and product demos for prospective clients in the railway industry (**LiDAR**) (*Ongoing*)

### D-Engraver Ltd

Hong Kong

Software Development Engineer

Aug 2021 – Sep 2022

- Designed and implemented the payment system including subscriptions, invoices, and 3D Authentication, with option of manual review and monitoring (**Stripe API**)
- Performed object matting using pixel-level manipulation to extract and enhance images (**Typescript**)
- Created an automated testing framework for unit and visual regression testing (**RobotJS, Typescript**)
- Integrated backend and frontend for both internal and client use (**ReactJS, NodeJS, TypeScript**)

### EWalker Management Ltd

Hong Kong

Associate Consultant – Software Engineer

Jun 2019 – May 2021

- Developed computer security and digital forensics software to aid security analysis (**Go**)
- Automated vulnerabilities detection testing and report generation, saving up to **12 manhours a day**
- Designed and implemented a long-term project to integrate security analysis software (**Go, ReactJS**)
- Performed analysis, visualization, and parameter optimization for log data (**Elasticsearch, Kibana**)
- Replicated and modified Elasticsearch functionality from scratch for more specific internal use (**Go**)

### Azeus Systems Limited

Hong Kong

Final Year Industry Project

Aug 2020 – May 2021

- Collected, cleaned, and pre-processed data to augment existing dataset while maintaining its properties (**Python**)
- Used Natural Language Processing to understand intent of users **using vector embedding similarities**
- Developed an NLP model to retrieve the relevant materials in an efficient manner (**BERT, RoBERTa, SBERT**)
- Developed web-application and linked it to backend to create a user-friendly UI for end-users (**ReactJS, Django**)

## TEACHING EXPERIENCE

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### St. John's College, The University of Hong Kong

Hong Kong

Resident Tutor

Jul 2021 – Present

- Advised engineering undergraduate students on course selection and internship opportunities
- Reported on students' college life experience and their concerns to senior management to discuss future college direction

- Helped with admission decisions and allocation of freshmen to different floors to try and optimize their experience
- Supervised student projects such as digitalization of college library and archives records

#### Faculty of Engineering, The University of Hong Kong

Faculty Peer Mentor

Hong Kong

Sep 2020 – Jun 2021

- Mentored a group of 8 freshmen throughout their first of studies to help them settle into their university life
- Held regular consultations to discuss and guide their academic interests, course selection, and choice of major

#### Computer Science Department, The University of Hong Kong

Teaching Assistant – Computer Programming (COMP1330A, COMP1117B)

Hong Kong

Sep 2018 – Dec 2018, Jan 2020 – Jun 2020

- Mentored a group of 30 students to help them understand and implement algorithms in Python
- Aided students in programming by helping them debug their programs in Python
- Evaluated and provided feedback on tutorials and assignments

### SELECTED PROJECTS

- **NLPART**: Art generator that analyzes and summarizes audio and text to generate HD paintings (**Speech Recognition, Text Summarization, Keyword extraction, VQGAN, StyleGAN**) (Ongoing)
- **Lens**: Smart multiclass object detection and recognition software (**Python, CNN, SVM**)
- **MRec**: A movie recommendation system using memory-based collaborative filtering (**R**)
- **MCQueue**: Application for quizzing and giving students personalized feedback (**ReactNative, Go, SQLite**)
- **Twisttler**: Microblogging social networking website (**ReactJS, NodeJS, PostgreSQL**)
- **BigTwo**: Multiplayer networked cross-platform card game (**Java**)
- **Xinu**: Modified version of the light-weight operating system Xinu to satisfy more specific needs (**C, C++**)

### SKILLS AND TECHNOLOGIES

- **Core**: C, C++, Go, Python, Java, Javascript, Typescript
- **Web development**: HTML, CSS, ReactJS, Bootstrap, AngularJS, NodeJS, Django, MySQL, MongoDB, PostgreSQL
- **Machine Learning**: NLP, CNN, BERT, SBERT, TensorFlow, PyTorch, YOLO
- **Other**: Unix, Regex programming, Nmap, WireShark, Elasticsearch, Kibana

### EXTRACURRICULAR ACTIVITIES

#### Lee Foundation Library Committee, St. John'S College, The University of Hong Kong

Cofounder, Head: 2018 – 2019, Core Committee Member: 2017 - Present

Hong Kong

Aug 2017 - Present

- Co-founded the library committee to organize existing books, buy new useful books, and digitalize library records
- Created budgets, secured funding from management, and allocated it for efficient operation of the committee
- Created a self-checkout and return system for books using Libib to make the library books more accessible

#### SJC Robotics Club, St. John'S College, The University of Hong Kong

Team Member, Software Developer

Hong Kong

June 2018 – May 2021

- Worked in a team to design and create a remote-controlled robot for the Vex Robotics World Championship
- Developed the software for controlling the movements of various parts of the robot (**C++**)

#### Mastermind Debating Society, Mastermind English Medium School

President: 2015 – 2016, Team Member: 2012 – 2016

Dhaka, Bangladesh

Jul 2012 – Jun 2016

- Coordinated with school management to organize the team's participation in all tournaments during my presidency, with the team winning 5 national debate trophies during that year.
- Represented the school in several national and international Model United Nations both individually and as a team

### AWARDS AND ACHIEVEMENTS

- **HKSAR Government Scholarship** for academic achievement to cover 100% tuition plus living expenses (2017-2021)
- **HKU Foundation Entrance Scholarship** as a merit-based scholarship for pursuing studies at HKU (2017-2021)
- **St. Martin's Scholarship** for outstanding academic performance (2017-2021)
- **Exchange Program Scholarship** from HKU to pursue exchange studies at Purdue University (2019)
- **Dean's Honors List** from Faculty of Engineering, HKU for academic excellence (2018, 2021)
- **Pearson Edexcel High Achievers Award** for achieving Outstanding Results in A-Levels and O-Levels (2016, 2014)
- **The Daily Star Award** for attaining outstanding results in A-Levels and O-Levels (2016, 2014)
- **Special Mention Award** for public speaking in Indian International Model United Nations (2016)
- **Pearson Edexcel High Achievers Award** for attaining World Highest marks in A-Level Mathematics (2015)