

ZIYI ZHU

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EDUCATION

University of Cambridge, Christ's College

Cambridge, United Kingdom

Master of Engineering

Expected 2022

- Results: First class; Top 4% (ranked 12 out of 288) and awarded College Scholarship.
- Modules: Information and Computer Engineering, Electrical and Information Sciences, Instrumentation and Control.
- Coursework: Python programming, MATLAB programming, data structures and algorithms, CAD with SolidWorks, structural project, conceptual product design, integrated mechanical and electrical design, hand-drawing skills.
- Awards: Winner of Christ's College Art Prize 2021; Winner of CUES Hackathon 2021.

WORK EXPERIENCES

Seamless Capital

Cambridge, United Kingdom

Software Engineer

Aug. 2021 – Sep. 2021

- Developed algorithm to extract information and predict answers from a given context using BERT model and SQuAD dataset.
- Built and deployed 6 live chatbots with a variety of functionalities and full-stack web development for the Chat AI platform.
- Researched scientific approach to strategy design for early to growth stage start-ups and successful entrepreneurial businesses.

UBS Group AG

London, United Kingdom

Financing Quant Intern

June 2021 – Aug. 2021

- Supported the trading activity for the Stock Borrow Loan (SBL) desk, including trade booking and pre/post-trade reconciliations.
- Developed tools on the Advanced Cloud Quantitative Analytics (ACQA) platform for repo rate curve analysis and asset pricing.
- Streamlined the process of dividend futures marking and curve fitting to interpolate implied interest rates from the market quotes.

Ocado Technology

Hatfield, United Kingdom

Machine Learning Intern

July 2020 – Sep. 2020

- Collaborated with engineers to design an autonomous robot navigation and control system using end-to-end imitation learning.
- Streamlined the dataset collection process (35,000+ data points) for training machine learning models in Python and TensorFlow.
- Benchmarked machine learning models in urban simulation using Unreal Engine 4 to discover optimal training parameters.

University of Cambridge

Cambridge, United Kingdom

Research Intern

July 2019 – Sep. 2019

- Independently designed and engineered a system to capture 3D scenes in the form of HDR light field for stereoscopic vision.
- Assembled and calibrated the HDR Multi-Focal Stereo Display in collaboration with postdoctoral researchers.

HY M&E Consultancy Services

Singapore

Assistant Engineer

Mar. 2018 – May 2018

- Explored the use of Computational Fluid Dynamics (CFD) simulations for precise evaluation of site-specific fan performance.
- Developed an architectural visualization software in Unity Engine for in-depth evaluation of lightning protection in buildings.

ACTIVITIES

Hack Cambridge 101

Cambridge, United Kingdom

Team Leader

Jan. 2020

- Designed trading algorithms using dual listing arbitrage and competed on a virtual platform to achieve top 5 in total P&L.
- Conceptualized and spearheaded a smart bin initiative that united a team of 4 engineers and aims to improve energy efficiency.
- Integrated machine learning and IoT for waste sorting (~90% accuracy) and efficient planning of garbage truck routes.

Cambridge University Robotics Society Rescue Major

Cambridge, United Kingdom

Member

Oct. 2018 – June 2019

- Cooperated with a team of undergraduates to design and construct a rescue robot which can be controlled using ROS.
- Experimented with 2D mapping for autonomous driving and navigation of the robot using LiDAR and infrared sensors.

Personal Projects

- Authored blog posts highlighting 10+ personal projects and academic studies with 2000+ views and 1000+ unique visitors.
- Implemented GANs to generate realistic-looking Pokémon and CNNs with logistic regression to classify the types of Pokémon.
- Modelled price of stocks with geometric Brownian Motion and verified Black Scholes Model with Monte Carlo simulation.

SKILLS & INTERESTS

Languages: Chinese (Native), English (Fluent), Japanese (Elementary).

Programming: Expert in Python, JavaScript and HTML; Experienced in C++, C#, Java, PHP and MATLAB.

Computing: Proficient in machine learning and computer vision; Expert in software and web development (Linux/Windows); Experienced in game development (Unity/Unreal Engine), microcontrollers (Arduino/Raspberry Pi), robotics and CFD simulations.

Software: Proficient in SolidWorks and Photoshop; Experienced in TensorFlow, OpenCV, AutoCAD and SketchUp.

Hobbies: Guitar, piano, drum set, oil painting, sketching, photography, pool, tennis, table tennis and travel.