Oliver Ip

kni22@bath.ac.uk - +44 7478 818 180 - LinkedIn - Github
Home address: 550 Victoria Street, Baguio Villa, Block 19, Flat 16A, Pok Fu Lam, Hong Kong
Term time address: BA2 3GW, Stothert Avenue, Noble House, Flat 16, Bath, United Kingdom

Driven second year computer science student, seeking an enriching placement opportunity to gain firsthand experience in the dynamic tech industry. With a passion for programming and past experience in digital design, machine learning and software engineering, eager to collaborate with professionals on transformative projects, further developing technical skills and exploring potential career paths. Aimed to maximize this formative year by actively contributing to impactful work and gaining well-rounded exposure to the field.

EDUCATION

2022-2026   **University of Bath - Bsc Computer Science | 1st Year Average Grade: 68.5% | Predicted classification 2:1**
- First year modules: Programming, Discrete Mathematics, Mathematics for Computation, Computer Systems Architecture, Artificial Intelligence, Software Processes and Modelling.
- Second year, I will learn cybersecurity, machine learning, develop models for software engineering and more.
- Using paramount analytical skills to develop RPG games with pathfinding, collision detection and damage calculation in Java. Having a passion for game development, I demonstrated a lot of enthusiasm and dedication to this project.
- Worked on Spam filtering and image recognition AI using deep learning algorithms, greatly testing my problem solving.

2016-2022   **St. Paul's Co-Educational College | International Baccalaureate | Final Grade: 42 marks out of 45**
- Subjects studied: Mathematics, Chemistry, Biology, Economics, English, Chinese, Theory of Knowledge.
- Part of the cyber ambassador club enhancing the school's cybersecurity, held a code-breaking contests, Cicada 3301.
- Technical lead of the "Asklepian Medical Society", specializing in video editing and graphic design using applications including Davinci Resolve and Blender. Directed a team of skilled technicians which cultivates strong leadership abilities.
- Used Blockbench in a 2-year long school project, aimed to recreate Hong Kong's historical attractions in Minecraft.
- Presented in the HKUST: CSE Research and Technology Forum. Illustrated ideas such as computer vision and AI chips, enhancing personal growth and building a wider professional network.

2021-2022   **Pearson GCE A-levels | Mathematics | Final Grade: A***
- Units included: Pure Mathematics, Statistics, Mechanics.
- Took initiative to self-study A-levels to enhance personal abstract reasoning and computational thinking.

TECHNICAL SKILLS
- **Coding:** Knowledge in Python, C, Java, TypeScript, JavaScript, CSS and HTML.
- **Web building:** Experience with full-stack web development utilizing modern frameworks including NestJS, Vue.js, Node.js and React Native to build responsive, interactive user interfaces and scalable back-end systems.
- **Digital design:** Skilled in 3D animation and modeling using Blender; created visually appealing assets and animations for school projects. Keen eye for lighting, textures and capturing realistic physics.
- **Video editing:** Proficient in advanced video editing and color grading techniques using DaVinci Resolve. Avid creator of digital designs, dedicated to achieving stunning visual effects and seamless editing.
- **AI concepts:** Understanding in AI including machine learning, neural networks, natural language processing and computer vision. Ability to carry out algorithms such as constraint satisfaction, expectation maximization and Bayesian inference.

TECHNICAL PROJECTS

Autumn 2023   **School Project - Mobile App Development**
- Developed a complex health and money tracker android app with Android Studio, utilizing Scrum as an agile methodology, Object Oriented Analysis and Android activities. Was the lead designer and beta tester of the team, involving rigorous bug fixing in Java, and the utilization of applications such as Photoshop for UI making.
- Working in a group environment taught me to communicate effectively, delegate tasks, and resolve conflicts constructively.

Spring 2023   **Personal Project - Claw Machine**
- Created a basic yet fun-to-use claw machine. Designs were made on Tinkercad and 3D printed. Arduino microcontrollers enabled complex controls, for example using a potentiometer for nuanced claw movement.
- Used Intricate mechanics of motors and belts for smoother horizontal and vertical motion. Was a fruitful experience that refined my diverse engineering and coding skills as well as creativity.

Oliver Ip

RELEVANT EXPERIENCE

Summer 2020   **HKU Summer Institute - Robotics Design and Applications**
- Through hands-on practice, I familiarized myself with robotics and circuit construction, gaining valuable skills in healthcare and mobility applications that improved my technical capabilities.
- Liaised extensively with different parties on a complex final project using Raspberry pi, Arduino UNO, and AutoCAD, further developing my teamwork and communication abilities.

Summer 2019   **CUHK Summer Program for the Gifted: Introduction to the Number Theory**
- Conducted extensive quantitative and qualitative mathematical research studies on advanced theoretical topics such as inter-valued functions and arithmetic geometry.
- applied computational techniques from number theory to produce an extensive data-analytic research project on cryptographically secure pseudo-random number generation.

WORK AND VOLUNTARY ACTIVITIES

Summer 2025   **Team Lemme - Core Member and Software Developer**
- core member of Team Lemme, a pop-up coffee store startup. Developed and maintained a full-stack point-of-sale and kitchen management system using Next.js, TypeScript, React, and Supabase.

Spring 2025+   **Oxbridge Tutoring - Science Tutor**
- Deliver engaging lessons in Biology, Chemistry, and Physics to secondary school students
- Focusing on key topics such as cell biology, human physiology, and health and disease.

Summer 2024-25 **Spark Layer - Software Engineer**
- Contributed to the development and optimization of e-commerce solutions using PHP, Golang, and TypeScript.
- Implemented new features, and played a key role in improving code quality to enhance user experience.
- Collaborated closely with cross-functional teams to ensure timely delivery of high-quality software.

Summer 2023   **I-Charge Solutions International Company Limited, Hong Kong - Summer Internship**
- Received enriching on-site training, assisted with new software installation on electric vehicle chargers, and conducted diagnostic testing to resolve issues, equipping me with well-rounded technical and troubleshooting expertise.
- Other tasks included data entry and SQL queries to organize maintenance records, as well as designing brochures and flyers—an experience that enhanced my creativity and prepared me for future software development roles.

2021-2022   **"E-Concept" Student-founded Company - Tutoring for Charity**
- Taught English, Maths, and Economics to strengthen subject comprehension and expertise.
- Aimed to improve students' well-being in a holistic approach by providing necessary voluntary tutoring and counseling.
- All earnings were donated to Non-profit Organizations such as Food Angel.

2019-2022   **HandsOnHK and RedCross - Volunteer**
- Monthly volunteering includes activities such as mentoring the youth, recycling soaps, and visiting isolated elderly to offer assistance to others in need and make a positive impact on the world.

INTERESTS
- English (bilingual), Cantonese (native), Mandarin (fluent), Japanese (basic).
- Hobby in blogging to stimulate creative thinking, writing reviews on movies, video games, and other genres.
- Travels a lot hoping to experience diverse cultures first-hand, inspiring innovative solutions.
- Active lifestyle enthusiast who enjoys exercising, swimming, cycling, football, choir, guitar, saxophone, and 3D printing.

REFEREE DETAILS

Dr Benjamin Ralph (Tutor)	Siobain Hone (Graduate Enterprise Manager)
Lecturer in Computer Science	Enterprise Education Manager and Higher Education Consultant
University of Bath BA2 7PS	University of Bath
Email: b.d.ralph@bath.ac.uk	Email: sh267@bath.ac.uk