

# KARINA NATHALIE

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## EDUCATION

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### The University of Hong Kong (HKU)

Hong Kong

Bachelor of Engineering

Expected Graduation: June 2026

- GPA: 3.85 (First Class Honours)
- Activities and Societies: HKU Student Ambassador, Shun Hing College Event Management Team
- Relevant Coursework: Python; C++, C, Git, Bash, Linux Environment; Data Structures and Algorithm; OOP and Java; Microeconomics; Linear Algebra, Probability, and Statistics; Calculus and ODE; Electricity and Electronics
- Teaching Assistantship: ENGG1340 (C++, C, Git, Bash, Linux Environment)
- Academic Honours: Belt and Road Scholarship Awardee (full tuition, renewable for all the years of study)

## WORKING EXPERIENCE

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### Intuvision Limited Co.

Hong Kong

Software Developer Intern

June 2023 - Aug 2023

- Spearheaded the enhancement of the smart matching algorithms within the Automatic AR Projection System (AARP) by elevating the overall performance of the system and ensuring consistent and reliable results across a wide spectrum of test inputs.
- Conducted in-depth research into distance measurement metric and delivered a comprehensive overview to the team, showcasing alternative metrics that could be employed.
- Incorporated the integration of the Earth Mover's distance (EMD) metric into the existing matching algorithm by introducing color-based distance metrics alongside location-based metrics.
- Introduced a dynamic scaling aspect to the system, enabling automatic adjustment of point cloud sizes in line with the prediction, resulting a more efficient matching process.
- Technical Tools: Python, Git Bash, GitHub, Amazon Web Services (AWS), Paraview, VTK (Visualization Tool Kit), Scientific Python Packages (PyTorch, Open3D, Numpy), Jupyter Notebooks, VSCode

## RELEVANT PROJECTS (see [Portfolio Website](#) for detail)

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### Smart Luggage System

Nov 2023

- An integrated Environmental, Social, and Governance (ESG) strategy designed for the airline industry, emphasizing customer-centric carbon reduction and operational efficiency for a seamless travel experience
- Developed flight planning system and mobile application front-end using React.js prototype and contributed in the development of AR Measurement System and Monte Carlo Simulation.

### MigraMatch

Oct 2023

- A cutting-edge mobile application leveraging Generative AI to effectively tackle prevalent challenges encountered by Foreign Domestic Helpers and fill in the gaps of current offerings
- Led the end-to-end creation of the mobile app prototype utilizing tools such as Figma for design and React.js for implementation, ensuring a seamless and intuitive user interface
- Securing the 1<sup>st</sup> Runner Up Social Inequality and Injustice Track and 2<sup>nd</sup> Runner Up on Productive Collaborative Work Award at HKU GenAI Hackathon.

### Propertunity

May 2023

- An innovative financial solution, backed by cryptocurrency, enabling individuals to tap into mortgage values comparable to those offered by traditional banks
- Devised a meticulous business strategy, implementing intricate technical details to seamlessly incorporate cryptocurrency and optimized mortgage rates
- Achieved the 3rd Prize in the Chan Dang Foundation Social Entrepreneurship Awards at HackUST 2023

## LANGUAGES & SKILLS

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- **Hackathon Awards:** Champion and The Most Creative Award of CityHack (2023), 2<sup>nd</sup> Runner Up Chan Dang Foundation Social Entrepreneurship Awards (Top 10 Finalist) at HackUST (2023), 1<sup>st</sup> Runner Up Social Inequality and Injustice Track and 2<sup>nd</sup> Runner Up on Productive Collaborative Work Award at HKU GenAI Hackathon (2023), 2<sup>nd</sup> Runner Up Place of HackHERthon (2022)
- **Technical Skills:** Python, Web Programming (HTML, CSS, JavaScript, React.js), UI/UX Design (Figma), [Google Data Analytics](#) (SQL, Tableau, R), C++, C, Linux, Bash, Git, Amazon Web Services (AWS), Java, XCode
- **Languages:** Bahasa Indonesia (native or bilingual proficiency), English (full professional proficiency)