

# Koh Lewis

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**Programming Languages:** Java, C#, PHP, JavaScript, C++

**Software:** Unity, MySQL, Unreal Engine, Microsoft Office, Visual Studio, InfluxDB, Google Sheets

## WORKING EXPERIENCE

### **AAX Singapore Pte Ltd – Software Engineer, Apr - Nov 2021**

- Worked on Matching Engine core logic and micro-service features utilizing Zero GC Java
- Emphasized speed, calculating time to process tasks at the nanosecond precision level
- Created Google Sheets dashboard to display stats for internal projects
- Worked with InfluxDB data to calculate real-time data aggregating 10,000s of data points/s

### **Carnegie Mellon University (Building Virtual Worlds) – Teaching Assistant, Sept - Dec 2021**

- Coordinated and managed a team of four
- Implemented training sessions to teach students how to use equipment
- Provided support and feedback to teams for their projects
- Held retrospective sessions for student teams

### **Ngee Ann Polytechnic – Software Developer, Jul - Nov 2014**

- Created an application to experiment with utilizing Bluetooth LE beacons
- Created a content management system for inputting student data for Graduation Showcase

### **Cherry Credits – Intern (attachment programme), Apr - Jul 2013**

- Tested and implemented open-source web analytics software

## EDUCATION

### **Carnegie Mellon University, 2021**

Master of Entertainment Technology (QPA 3.78 / 4.33)

### **National University of Singapore, 2019**

Bachelor of Computing in Computer Science with Honours (Distinction) (GPA 4.26 / 5)  
Computer Graphics and Games Focus Area / AI Focus Area

### **Ngee Ann Polytechnic, Singapore, 2014**

Diploma in Information Technology with Merit

Certificates in Advanced Computing Mathematics; Business; Business Solutions Design; Web Design & Development

## ACHIEVEMENTS

- 2<sup>nd</sup> Place in GameCraft! 2019 (Animals Crossing)
- 1<sup>st</sup> Place in 15<sup>th</sup>-STePS (I Was Tasked To Defend This Place With My 2 Friends!)
- 2<sup>nd</sup> Place in 12<sup>th</sup>-STePS (this.place)
- Integrated Infocomm Scholarship (Infocomm Media Development Authority)
  - 2011 – 2014 (Polytechnic level)
  - 2016 – 2019 (Undergraduate level)
- Director's List (Semester 1, 2, 3 and 4) (Ngee Ann Polytechnic)
- 2012 Singapore Microsoft Office Academic Skills Challenge
  - 1<sup>st</sup> Place in Microsoft Excel 2010
  - 2<sup>nd</sup> Place in Microsoft Word 2010

## NOTABLE PROJECTS

### 404 Productions – Producer/Programmer

- Built a mini-game compilation for *53605 Interdisciplinary Project I, CMU* in a team of five
- Managed the team and overall project scope and direction
- Coordinated and ran meetings with internal and external stakeholders
- Worked on quality-of-life features and overall user experience
- Try online at: [chunangang.github.io/picoCTF\\_build/index.html](https://chunangang.github.io/picoCTF_build/index.html)

### Experience Design – Programmer

- Built location-based experiences for *53613 Experience Design, CMU* in various teams
  - Utilized Phigets to create an escape room game
  - Controlled DMX lights to sync with music in a lighting showcase
  - Managed multiple screens and a Motion Floor to make a co-op CAVE experience
- Implemented mechanics, logic, and scripting of the experiences
- Juggled multiple projects concurrently, working around design and assets team members

### VESP - Programmer

- Built a virtual reality experience for *53610 Interdisciplinary Project III, CMU* in a team of five
- Worked on experience logic and mechanics, and interactions utilizing VR headsets
- Utilized Zapier to automate notifications on Slack from our task list on AirTable

### Building Virtual Worlds - Programmer

- In various teams, built multiple proof-of-concepts for games for *53831 BVW, CMU*
- Iterated through multiple games to experiment with different technologies
  - Used webcams and microphones to implement alternate forms of control
  - Utilized AirConsole to create a multiplayer game using players' smartphones
  - Used Photon to create a lobby system for players to connect and play together
  - Used Photon again, to create a drop-in drop-out, continuous multiplayer game
- Worked on game logic, mechanics, design, and integrating assets from team members

### I Was Tasked To Defend This Place With My 2 Friends! - Programmer

- Built a co-op auto-battler for *CS4350 Game Development Project, NUS* in a team of five
- Worked on character, enemy, stage, environmental, and overall game design & development
- Download at: [drive.google.com/open?id=1RNfZecDR0G00hYq49PInPPXkChQmAE\\_e](https://drive.google.com/open?id=1RNfZecDR0G00hYq49PInPPXkChQmAE_e)

### this.place - Programmer

- Built a puzzle platformer for *CS3247 Games Development, NUS* in a team of five
- Worked on player/camera movement, camera, user interface/input, and controller integration
- Download at: [drive.google.com/open?id=1vY\\_PmFq8OV1iyXYB7VzToGy2vS60UU1o](https://drive.google.com/open?id=1vY_PmFq8OV1iyXYB7VzToGy2vS60UU1o)

### Animals Crossing – Game Design

- Built an action-puzzle game for *GameCraft! 2019* in a team of four
- Worked on level design and implementation, as well as environmental art and design
- Try online at: [zy-ang.itch.io/animals-crossing](https://zy-ang.itch.io/animals-crossing)

### Sticky Keys - Programmer

- Built a competitive action platformer for *GameCraft! 2017* in a team of five
- Worked on powerups/debuffs and background scrolling in C#, as well as life point tracking
- Try online at: [zy-ang.itch.io/sticky-keys](https://zy-ang.itch.io/sticky-keys)

## CO-CURRICULAR ACTIVITIES

National University of Singapore - NUS Board Games President, 2017 – 2019  
Ngee Ann Polytechnic - Board Games Club Events Co-ordinator, 2011 – 2013