RAVYU

Undergraduate CS Student

@ ravyus2@illinois.edu   📞 217-417-8687   📍 Champaign, IL

in Ravyu   ⌂ RavyuS   🏛 GPA (cumulative): 4.0/4.0

WORK EXPERIENCE

Software Design Studio Course Assistant
UIUC CS Department

📅 Jan 2021 – May 2021   📍 Champaign, IL

- Taught students on programming fundamentals: Object Oriented Programming (C++/Java), black box testing, build automation tools (Maven/Cmake)
- Assessed and graded students code on weekly projects, with an emphasis on strong programming practices (modularity, object decomposition, encapsulation, documentation, testing).
- Hosted weekly Code Review sessions to facillitate discussion on programming practices with students.

Backend Developer
CloudZen Pte., Ltd.,

📅 Jan 2018 – Apr 2018   📍 Singapore

- Developed backend infrastructure for the Company's flagship project—Gamecloud. Setup a Leaderboard database (MongoDB + Redis) that is linked via API endpoints defined in Azure Functions.
- Designed network pipeline for latency sensitive applications like game streaming over both cellular and WAN connections. Contributed to the UDP socket programming team.
- Spearheaded virtualization infrastructure setup with focus on performance for gaming. The virtualization infrastructure was built on a KVM-based virtualization platform, with Proxmox used for cluster management.

LEADERSHIP

Lead Programmer
ACS(I) Robotics Club

📅 Jan 2016 – Nov 2017   📍 Singapore

- Led club as head programmer during competitions (VEX Worlds, RoboCup). Coordinated team efforts with weekly meetings leading up to the competitions, and guided junior members along the way.
- Programmed microcontrollers in various instruction sets (ARM Cortex-M, Atmel AVR) in embedded C and assembly.
- Designed custom circuit boards, experienced in soldering and EAGLE Design. Also picked up mechanical skills (sawing, drilling) for robot construction.

Air Warfare Officer
Singapore Armed Forces

📅 Apr 2018 – Apr 2020   📍 Singapore

- Trained as Air Traffic Control (ATC) Officer; in charge of recovering air assets in the event of national emergencies.

EDUCATION

B.Sc. in Computer Science
University of Illinois at Urbana-Champaign

📅 Aug 2020 –

NOTABLE AWARDS

🏆 **VEX Worlds**
2017 Division Finalist
2016 Division Quarter-Finalist

🏆 **VEX Skills Programming Qualifiers 2016**
2nd in World rankings (out of 4000 teams)

TECHNICAL SKILLS

C/C++   ●●●●○
Java   ●●●○○

LAMP stack + AWS   ●●●○○
React-Native   ●●○○○

Embedded Systems   ●●○○○
Autonomous Systems   ●○○○○

TensorFlow/PyTorch   ●○○○○

COURSEWORK

Discrete Structures   Data Structures (C++)

Computer Architecture

Programming Studio (Java/C++)

Calculus I-III

- Led ATC operations briefs on a weekly and daily basis. Managed communication between various base squadrons during day-to-day operations.
- Completed service on April 10th with the rank of Lieutenant.

President
UIUC Singapore Students Association

📅 Mar 2021 –   📍 Champaign, IL

PROJECTS

Air Traffic Control Currency Tracker
Republic of Singapore Air Force

📅 Apr 2019 – Apr 2020   📍 Singapore

- Revamped Air Traffic Controller eligibility tracking system in Squadron to ensure controllers' skills remain current, thus preventing ineligible controllers from controlling.
- The project made use of the Telegram Bot framework for the frontend and Google Apps Script (JavaScript) for the backend, with a focus on high-availability and security to meet operations-sensitive demands.
- Gave monthly progress presentations to base commanders, showcasing product demo builds.

Open Source Initiative
ACS(I) Robotics Club

📅 Nov 2016 – Apr 2017   📍 Singapore

Led an initiative to switch to open source robotics platforms for use in Competitions.

- Conducted workshops on how to read instruction set manuals for Arduino (AVR) and datasheets for sensors/electronics, with an emphasis on appreciation for open source culture.
- Taught basic computer architecture concepts (ALUs, registers, IO) to junior members.
- Setup and maintained communication channels between the software team, hardware team and part suppliers.

Self-Hosted cloud server

📅 Ongoing

Converted my desktop to a cloud server for personal use.

- Running full LAMP stack with Nextcloud (Cloud storage), Gitea (Git server), SSH, VNC.
- Utilized Linux OS specific tools (network management, bash scripting, systemd, software RAID) to setup the hosting platform.
- Working on secure remote WOL (Wake on LAN) solution.

OTHER ACHIEVEMENTS

🏆 **DSTA Code_EXP 2020 Finalist**
National mobile app hackathon; University category

🏆 **DSTA TIL 2020 Finalist**
Machine Learning Robotics based hackathon; University category

🏆 **Singapore VEX Nationals 2016**
Tertiary Division Champions
Tournament Excellence Award
Programming Skills Champions

🏆 **CodeForCorona Hackathon 2020 Finalist**
Open category

🏆 **RoboCup Singapore 2017**
4th Placing

🏫 **School Awards**
Certificate of Distinction for contribution in Robotics–2016, 2017

Distinguished Service Award for Exemplary Leadership–2017