RAVYU

@ ravyus2@illinois.edu 📞 217-417-8687 📍 Champaign, IL
🔗 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 (Java/C++), black box testing, build automation tools (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—GameHub. 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 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

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

Led ATC operations briefs on a weekly and daily basis and managed communication between various bases during day-to-day operations

EDUCATION

Bachelors in Science, Computer Science
University of Illinois at Urbana-Champaign

📅 May 2023 GPA: 4.0/4.0

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

Skill	Rating
C/C++	●●●●○
Java	●●●○○
LAMP stack + AWS	●●●○○
React-Native	●●●○○
Embedded Systems	●●○○○
Autonomous Systems	●○○○○
TensorFlow/PyTorch	●○○○○

COURSEWORK

Algorithms and Models of Computation

Data Structures (C++) Computer Architecture

Probability and Statistics

Applied Linear Algebra (Python) Discrete Structur

Programming Studio (Java/C++) Calculus I-III

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

Presented monthly progress presentations to base commanders, showcasing product demo builds to clients with no technical experience

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