

Andrew Pan

computation enthusiast

education

2019–present **Bachelor of Arts in Computer Science**, *University of Minnesota*, 3.756 GPA.
Currently a **junior** at the University of Minnesota, expected graduation **Spring 2022**.

selected CSCI coursework

- CSCI2021, Machine Architecture and Organization
- CSCI2041, Advanced Programming Principles
- CSCI2033, Elementary Computational Linear Algebra
- CSCI5551, Introduction to Intelligent Robotic Systems (in-progress)
- CSCI4611, Programming Interactive Computer Graphics and Games (in-progress)

extracurriculars

ACM UMN 2020–present Officer (webmaster) for ACM UMN, the local chapter of the Association for Computing Machinery.

UMN SVP 2019–present Member of the Controls subteam on the U of M Solar Vehicle Project. Worked on design of the rearview system and integrated USB support for the telemetry system.

FTC 2016–2019 Programmer for First Tech Challenge teams 5199 and 6200. The First Tech Challenge is a global robotics competition for students in middle and high school. Implemented computer vision algorithms for autonomous robot operation (OpenCV), running on an Android-based robotics platform. Took Team 5199 to the world championship.

skillset

individual categories ordered by exposure, most to least.

web	REST, PHP, node, HTML/JS	sysadmin	unix shells, awk, misc. unix tooling, docker
systems	git, reverse engineering, go, c/pp, ARM asm	mobile	java, android apps

personal projects and contributions

[tpl-c900-openwrt-install](#)

- keywords reverse engineering, embedded, unix, lua, go
- description Broke firmware verification scheme on the TP-Link Archer C900, a consumer router. Installed alternative open source router firmware (OpenWRT). Documented process for others to follow.

[J2V8](#)

- keywords cpp, nodejs, android, docker
- description Ported J2V8, Java bindings for the NodeJS JavaScript engine, to Android. Automated build process with a Docker image. Submitted changes to upstream.

[Sheep](#)

- keywords php, minecraft, pocketmine
- description Wrote and maintained a plugin manager for PocketMine-MP, the third-party Minecraft: Pocket Edition server software. Gained familiarity with PHP dependency management (Composer) and the general ecosystem.