Andrew Pan

computation enthusiast

education

2019–present   **B.A. in Computer Science**, *University of Minnesota*, 3.756 GPA.

Currently a **sophomore** by year, **junior** by credit level 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	RE (mobile and desktop apps), go, c/pp, ARM asm	**mobile**	java, android app dev.

personal projects and contributions

tpl-c900-openwrt-install

keywords   reverse engineering, unix tooling, 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.