

Neil Chulani

College

Pomona College, Computer Science and Math, Graduating Spring 2026

GPA: 3.96, Awarded Pomona College Scholar

Relevant Coursework:

- Microprocessor Systems: Design and Application, Data Structures and Advanced Programming, Differential Equations/Modeling, Principles of Real Analysis I, Probability, Advanced Linear Algebra (Fall 2023)
- Discrete Math & Functional Programming, Vector Calculus, Intro Engineering Design & Manufacturing with Lab, Mathematics of Big Data, Introductory Classical Mechanics, Introductory Electricity and Magnetism (Spring 2023)
- Linear Algebra, Big Ideas in Modern Physics with Lab, Principles: Macroeconomics (Fall 2022)
- AP Computer Science Principles, AP Computer Science A (High School)

Work Experience

Apple - Battery Firmware Engineering Intern (Summer 2023)

- Working with embedded systems to contribute to firmware functionality for interacting with Battery Management System chip on iPhone and Apple Watch
- Development for ARM Micro Trace Buffer (MTB), I2C communication, and other firmware features

Arcadia Tractor - Software & Hardware Engineer (June 2021 - August 2022)

- Worked on an autonomous golf driving range ball picker and developed a Controller Area Network (CAN Bus) battery monitor system
- Built golf ball detection machine learning model using TensorFlow and OpenCV
- Software and Hardware development on Jetson TX2, Jetson Xavier, Raspberry Pi, and Arduino for various uses including bin level detection, auto-charging station, and obstacle detection integrated with ROS

Cisco Systems - Product Management Internship (Summer 2020)

- Prototyped a new video conferencing product: Cisco Telepresence - Home Edition based on research with teams to see what was needed during the Covid-19 pandemic

Skills

Programming Languages: C, C++, Haskell, Python, Java, Swift (UI and Storyboard), Ruby, JavaScript

Experience with CAD development, PCB Design, ROS, UART, I2C, CAN Bus, Git, Jenkins

FGPA Development with SystemVerilog, Embedded systems development with ARM chips, as well as experience with Logic Analyzers and Oscilloscopes

Machine Learning Skills: Stable Diffusion, TensorFlow, OpenCV, Gradient Descent and NNs

General understanding of secure development, including Stack and Heap Overflows, Integer Overflows, Underflows, and Signedness, Uninitialized Memory, Type Confusion, Race conditions, and Use After Free vulnerabilities

Projects

Built A Programmable 8-Bit Breadboard (and later PCB) Computer based on SAP-1 Architecture using Logic Gates

Personal Website: <https://tnnsbeast.github.io/Website/>

AES-128 hardware accelerator implemented on FPGA using SystemVerilog

SendHelp, COVID Tracker - 2 iOS Apps Developed using Swift

School Security - A security system with built in AI capabilities to identify intruders on school campuses using Google's

Teachable Machines and JavaScript

RFID Door Lock built with Raspberry Pi

GitHub: <https://github.com/TnnsBeast>

On Campus

P-AI - Machine Learning and Artificial Intelligence project based organization

Aceing Autism Volunteer - Helping children with Autism develop and benefit from social connections through tennis

Pomona-Pitzer Varsity Men's Tennis

High School

Saint Francis High School - GPA: 4.42 (weighted), awarded High Honor Roll

Clubs: Stock Market - Board Member, Science and Engineering, Programming, South Asian Student Association

Varsity Tennis Captain

References

Adrian Alting-Mees, Firmware Manager for Battery Management at Apple - a_alingmees@apple.com (Manager)

David Dorhout, Co-Founder and CTO of Arcadia Tractor - Cell: (515) 201-7682 (Manager)

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