Aman Adhikari

Computer Engineer | (626)-616-1244 | amanadhikarisso@gmail.com | GitHub | Linkedin

EDUCATION

Computer Engineering - B.A of Science | California State Polytechnic University, Pomona | Expected Graduation- 2025

- GPA | 3.33 / 4.00
- Coursework | Electrical Circuit Analysis, Electromagnetism and Circuits, Micro Electronics, Digital Logic, Verilog, Data Structures and Algorithms, Operating Systems

Computer Science and Electrical Engineering - C.S.E.E Diploma | Don Bosco Technical Institute | Graduation- MAY 2020

- GPA | 3.67 / 4.00
- Coursework | A.P Computer Science, Amplifiers, FTC Robotics.

EXPERIENCE

APT INVENTIONS; BattleBots | Software/Electronics Team Member | Jan2023 - *Current*

- Team member and contestant in the Live television competition "BattleBots". Bot name "DOOM".
- Familiarity with programming parts like motors, ESC, actuators, Robot Arms, and Rotating blades..
- Systems control using RF and Bluetooth. Integration and Familiarity with MakerX Go boards.
- Use of machinery to cut and shape robot parts chassis and other moving parts.
- Design and implementation of carbon fiber 3D printed parts and tools.
   Technologies: ROS, MakerX, C, SolidWorks, 3D printing.

Northrop Grumman | Ground Control Station Software Team | Aug 2023 - *Current*

- Team member of Northrop Gruman Collaboration Project. 6-month software engineering apprenticeship to design and develop IoT Communication interface for search-and-rescue operation.
- Developed and tested RabbitMQ APIs integrated with existing vehicles' Robot Operating System(ROS).
- Engineered a private TCP/IP network that allows for reliable communication between vehicles up to 10 miles apart in remote or GPS-denied environments.
   Technologies: VUE.JS, MICROPYTHON, ROS, Webscokets, RabbitMQ

NASA MINDS 2024 | Flying Telescope | Oct 2023 – *Current*

- An active member of NASA MINDS Artemis Misson project. Teamwork experience with the computer engineering department and team members from Cal Poly Pomona to mount a telescope on an octocopter drone for astrophotography.
- Machine Learning with Stellar database with Python to detect, track, and log the stars.
- Use of PixHawk, and RaspberryPi 4 to control servo motors, stepper motors, gyroscopic sensors, and telemetry to achieve gimble steadiness and tracking.
   Technologies: Linux, ComputerVision, C++, C, Git, PIXHawk,

BOSCO TECH HIGH SCHOOL | Robotics Student Mentor | Aug 2018- May 2020

- FTC Robotics team member. Taught programming to create robots that can solve tasks.
- Worked with the Android SDK platform. Developed and Debugged a robot communication app.
- Hands-on engineering learning experience. Measured and implemented designs for chains, tracks, claws, pulleys, chassis, drive trains, batteries, etc.
- Seniors partnered up with brother schools and formed teams to assemble robots that could solve specific tasks.

   Technologies: Robotics, JAVA, JavaScript, Android SDK,

SKILLS

- **Programming** | Java • Python • C • C# • C++• JavaScript (React, Vue, P5)
- Web Design, Front End, Machine Learning, Computer Vision.
- **Electronics** | Integrated Chips • Batteries • PCB Design • Embedded C • Synthisizers
- **Photography** | Picture Stacking• Adobe Photoshop • Astrocamera Lens•

Current Projects

Automated Irrigation | Python/Raspberry PI
- A fully automated irrigation system using live weather data with crop/environmental sensors. Crop steering and fertigation compatible.
- Capable of controlling multiple grows. Compatible with hydroponic and organic grows.

Astrophotography | Arduino/StellariumAPI
- A remotely controlled Astrocamera pan/tilt mount. Modular with most telescopes.
- Capable of live GPS coordination and satellite data.

Mini Modular Synthesizers | Electronics
- A modern synth module with sine, saw square, and pulse waves. Gain, Attack, cutoff, and Volume dials
- Plug and Play feature with most modern DAW software.