

# GURVIR KOONER

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## Education

### University of California - Berkeley

Aug. 2021 – May 2025

Management, Entrepreneurship, & Technology Program (M.E.T.)

Berkeley, CA

B.S. Electrical Engineering & Computer Sciences / B.S. Business Administration (GPA: 3.86)

## Relevant Coursework

- Data Structures
- Digital Design & ICs
- Computer Architecture
- Computer Vision\*
- Efficient Algorithms
- Machine Learning
- Robotics
- Computer Security\*

## Experience

### Keysight Technologies

June 2024 – Present

R&D Software Engineer Intern

Santa Rosa, CA

- Expanding mapping and geographical support on **30,000+** devices with WinCE firmware using .NET Framework (C#)
- Transitioning signal interference and mapping support to Embedded Linux devices using Qt GUI framework to generate **3M+** revenue (C++)
- Re-engineering KSMS maps to support orientation tracking, signal interference layering, and 3D model rendering using **Angular, TypeScript, and Electron** for multiple MM+ contracts

### Keysight Technologies

June 2023 – Aug. 2023

NPI Test Engineer Intern

Calabasas, CA

- Developed Tkinter GUI / CLI tool using **Python** to automate test data retrieval from **MySQL** database, expediting QA testing process by **25%**
- Spearheaded **Python** API to parse, organize, and summarize test data for over 50+ tests in Excel (XLSX) format for QA team, increasing hardware validation rate by **70%**
- Redesigned over 10+ **TCL** scripts to provide enhanced test metrics and support upcoming R&D hardware releases

### Rimble

June 2022 – Aug. 2022

Software Engineer Intern

San Francisco, CA

- Designed, developed, and launched 8 new REST APIs using **AWS** tools like DynamoDB, Lambda, S3, and API Gateway with **Python** to generate engagement features for esports viewers
- Upgraded 2 WebSocket APIs to reduce latency by 20% processing real-time raw esports data
- Architected 4 new WebSocket APIs to support real-time engagement features using AWS and Google Cloud

## Projects

### PintOS | C, x86

Jan. 2024 – May 2024

- Built an operating system in C and x86 supporting user programs, process control, multi-threading, and complex file systems
- Implemented user threads, strict priority scheduling, extensible files, and subdirectories

### Audio Activated Gesture Volume Controller | Python, OpenCV, Machine Learning

May 2023 – June 2023

- Developed an audio activated volume controller to adjust computer with hand gestures using OpenCV & MediaPipe
- Scanned computer audio using OpenAI's Whisper model to command volume controller activation

### Gitlet | Java

Mar. 2022 – Apr. 2022

- Developed local version control system using Java with serialization, SHA-1 hashing, and graphs
- Implemented git commands like init, add, rm, commit, log, find, status, checkout, branch, reset, and merge

## Technical Skills

**Languages:** Python, Java, C/C++, HTML/CSS, JavaScript, SQL, C#, MATLAB, Verilog, RISC-V, x86, TCL

**Developer Tools:** Git, Amazon Web Services, Google Cloud Platform, Docker, Postman

**Technologies/Frameworks:** Linux, Angular, Qt, PyTorch, GitHub, VLSI Design

## Leadership / Extracurricular

### EagleForce Robotics (FIRST Robotics Competiton Team 2073)

May 2018 – Aug. 2021

Electrical & Programming Director

- Programmed world championship robots using **Java** and **Python**, incorporating state space control, computer vision algorithms, and autonomous operation
- Led team of 5–10 programmers to championships, coordinating programming sprints and development
- Led community outreach teaching engineering and programming concepts using robotics to over 200+ students