Norwalk CA 90650

GABRIEL MEDINA

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Education

California State University, Dominguez Hills   **Spring 2019**

B.S. in Computer Science
Coursework: Networking; Security; Algorithms; Data Structures; Databases; Operating Systems

Projects

Secure Messaging Android App   **Senior Project**

Encrypted messages embedded into image files enables private message sharing through memes:

- Uses RSA encryption algorithm and 2048-bit public/private key pairs
- Private key is managed at the system level and can't be exposed (Android KeyStore)
- Open source steganographic algorithm to embed the message into the image file
- Used SQLite database to store friendly public keys acquired from scanned QR codes
- Public keys are easily shared in person via QR-code or online via URL/URI

Homelab (Headless Ubuntu Server)

- PLEX Media Server (personal content streaming for myself and friends/family)
- Automated media download services with local web interfaces
- File/filesystem management scripts

Raspberry Pi 3 & Pi Zero

- Discrete personal OpenVPN server (secure entry point to administrate remotely)
- Ad filtering and traffic monitoring (local DNS service blocks ads for all LAN devices)
- Wireless print server (enabling a wired printer to be wireless)

'Intelligent' Robot Vehicle

Built a robot vehicle that would process input from hardware and make an "intelligent" decision. Written in C for the Lego Mindstorms framework, interfacing with hardware "eyes" and "ears," implementing Psychology concepts of human cognition and decision-making.

Tech & Skills

- **Languages** Java; Python; C++; C; SQL; Bash
- **Networking** Hands-On LAN administration: Routers; Repeaters; Modems; VPN Clients & Servers; Network Printers; Samba Shares; SSH Remote Access; Firewalls; Port Forwarding
- **Security** Asymmetric/Symmetric encryption; Cryptography; Network access control; Pen-testing
- **Operating Systems** Linux {Ubuntu, Ubuntu Server, Raspbian}; Windows {10, 7, XP}
- **Other** Virtual machines & Docker; Microsoft Office Word & Excel; Adobe Photoshop & Illustrator

Additional Experience

Driving Instructor (2015-2020): *Safety 1st Driving School.* On-the-road instruction on how to drive.
Freelance Tech Support (2010-2015): Provide hardware/software tech support to friends and family.