Andrew Chen

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Education

UNIVERSITY OF CALIFORNIA, SANTA BARBARA **SEP 2020 - JUNE 2024**

- Bachelors of Science in Computer Engineering

Technical Skills

- **Languages:** C, C++, Python, Java, MIPS, Verilog, HTML, Javascript
- **Software Development:** Embedded Systems, UI/UX, Network Protocols, API Integration
- **AI/ML:** Neural Networks, Computer Vision, Model Training
- **Tools & Methodologies:** Version Control, Cross-Team Collaboration, Technical Documentation

Work Experience

SOFTWARE ENGINEER - UIC PAYMENTS INC. **OCT 2024 - PRESENT**

- Engineer and optimize embedded software solutions to enhance device functionality and feature integration, for improved user experience and efficiency
- Analyze and interpreted industry specifications to develop compliant payment processing solutions, collaborating with industry representatives to ensure proper implementation and integration
- Collaborate with internal and overseas engineering teams to deliver high-quality code while maintaining existing architecture integrity, adapting to changing requirements and ensuring cross-system interoperability among product lines and cloud services

WEB DEVELOPMENT ASSISTANT - UC SANTA BARBARA **AUG 2023 - JULY 2024**

- Coordinated with subject department webmasters to migrate content from Drupal 7 to 9
- Ensured content and layout parity while modifying outdated web structures to improve clarity and ease of navigation
- Collaborated with a team member to create and utilize Python scripts to identify and reformat HTML code to work with new website structure

Projects

BEZEL8-S - UNATTENDED PAYMENT TERMINAL **NOV 2024 - PRESENT**

- Developed dual-network connectivity (WIFI/LAN) framework for unattended payment terminals, ensuring continuous 24/7 operation with robust failover mechanisms and minimal downtime
- Implemented custom ISO 8583 payment processing functionality for private-label payment cards, integrating with vendor-specific specifications while maintaining compliance with industry standards
- Created streamlined application selection and configuration software to simplify terminal setup and management, reducing deployment time and maintenance complexity
- Integrated new libraries and custom code modules into existing payment software stack, ensuring compatibility with legacy systems while adhering to architecture integrity, modern coding standards, and industry best practices

EYEMATIC - AUTOMATIC IRIS DETECTION **AUG 2023 - JUNE 2024**

- Customized a PolarFire SoC FPGA to use a neural network model capable of detecting the iris, pupil, and surgery instruments with >95% confidence to aid surgeons performing cataract surgery
- Trained a Tiny-YOLOv3 model for custom object detection by annotating 1000+ images of in-house surgery footage (courtesy of project sponsor, Alcon)
- Improved firmware code based on our custom model specifications to interface with a high-definition camera and onboard HDMI passthrough