Chen-Yu Chang

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EDUCATION

Boston University | Boston, MA — May 2022
Bachelor of Science in Computer Engineering, Minor: Statistics — GPA: 3.39/4.0
Coursework: Machine Learning, Algorithms, Smart & Connected System, Computer Architecture, Signal & Systems, High Performance Programming with Multicore and GPUs, Cybersecurity

EXPERIENCE

Product Marketing Engineer | Texas Instruments | Sugar Land, TX — Sept 2022 - Jun 2023, Jan 2024 - Feb 2025
- Led new MCU definition with customer feedback and the need of peripherals and performance on new model vehicles
- Explored and visited worldwide automotive customers and Tier1s to promote and guide future EV architecture
- Hosted a webinar with MathWorks with 357 audience registered about Model Based Design on MCU support
- Expanded market share in new automotive field, including lighting, braking, BMS, zone, and increased 54% revenue
- Released products (F280015x, F28P55x, AM261x) and designed the campaign of application usage and differentiation

Applications Engineer | Texas Instruments | Sugar Land, TX — Jun 2023 - Dec 2023
- Initiated the launch and publications of new product F29x, including datasheet and whitepaper, paper being selected to present in Electronica panel
- Supported customer questions on peripherals, such as DCSM and PWM, within C2000 products on corporate E2E platform
- Conducted and coded temperature testing on F28P65x die to differentiate the defects to push the launch of the product

YouTuber | Remote — Jun 2023 - Present
- Self-learned to film and edit videos sharing tech insights and overseas experience, reaching 3k subscribers with thorough research, script, and plan

Video Production Director | FTSANE | Boston, MA (Remote) — Jun 2023 - May 2024
- Directed the team for video promotion on Instagram and YouTube with activity trailers and reviews
- Gained more influence and students in New England area to expand connections for activities and career

PROJECT

Beyond Air Tapping | Rtangent (Flutter, Unity, Python, Swift) — Sep 2021 - May 2022
- Engineered to project the 3D models onto the QR code on the hardware baton, where users can see through iOS app
- Created an iOS app allowing only authenticated admin to upload contents to project with different QR code
- Programmed to change QR code when button on the baton is pressed and allow 3D models to be presented in different angle

Smoothie Dispenser (JavaScript, C/C++, Node.js) — Sep 2020 - Dec 2020
- Integrated servos, thermistor, accelerometer, WebCam, Lidar, alphanumeric display to remotely drop and monitor smoothie to a container with a button on their phone

Greenmate App (Java) — Sep 2019 - Dec 2019
- Designed an Android app that helps ecofriendly activity, including walking instead of driving and recycling
- Filmed a commercial tutorial and created main character for this app
- Established score system with built-in pedometer in phone for walking record, and user input of recycling, leading to different character expressions

PAPERS

The C29 CPU – Unrivaled Real-Time Performance with Optimized Architecture on C2000 MCUs
- Evaluated key features of new C29x core and rephrase to what customers care
- Compared performance metrics between C28x/C29x cores and competition with a focus on interrupt response time, instruction cycles, and deterministic task execution
- Collaborated with engineers to deliver its pipeline and safety architecture's efficiency improvement
- Suggested industry use cases to showcase the optimization in control performances

Breadth First Search Optimization (C++, CUDA)
- Developed and benchmarked serial, hybrid, parallel, and GPU-accelerated BFS algorithms, achieving to 144x speedup over baseline implementation
- Enhanced performance through top-down/bottom-up switching heuristics, multithreading, cache blocking, and CUDA-based parallelization

Man in the Middle Attack: Principles and Tricks
- Implemented DoS, ARP spoofing, DNS spoofing, and SSL stripping using Kali Linux, Ettercap, and Wireshark
- Simulated live attacks to capture login credentials on unsecured networks and evaluated weaknesses in HTTP vs HTTPS
- Proposed practical defense strategies including VPN, Dynamic ARP inspection, HSTS preload, and static ARP tables

LEADERSHIP & ACTIVITIES

Cofounder of Broccoli's in the Fridge — Sept 2020 - Jan 2022
- Fully funded by Sustainability Seed Grant and BU-wide recognized food waste mitigator start-up, Boston, MA
- Built an iOS app to mitigate food waste by a calendar of best use dates and recipe suggestions by uploading receipt image with Swift and Figma

Hyper Rocket Team — Oct 2020 - Jan 2021
- Collaborated to design a hyper rocket to reach its maximum height
- Optimized the weight and structure of the rocket components and electronical system for improving performance through simulations
- Coordinated the electrical group to design the PCB for microcontrollers and sensors through Eagle