RYAN NI

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EDUCATION

University of California, San Diego — Expected Grad: **June 2026**

B.S. in **Computer Science, Cognitive Science (ML Specialization)** — *Dean's List ('23-'24)*

Courses: Software Engineering I, Computer Systems & C Programming in Unix/Linux, Computer Vision — ***3.8 GPA***

PROFESSIONAL EXPERIENCE

Computational Linguistics Research Assistant — **Dec 2024 – Present**
Language and Infant Learning Lab — *San Diego, CA*
- Analyzing **3,000+ empirical data points** identifying significant patterns in language learning and visualized data using R
- Accelerated **data processing efficiency by 60%** by automating audio-to-text transcription workflows using Wispr API
- Revising sections of our research paper for the **2025 ACL Conference** and consistently contributing to **20+ datasets**

Software Engineering Intern (Full Stack) — **Jan 2024 – Sep 2024**
Dream Voyage — *Berkeley, CA*
- Increased user traffic to **35,000+ monthly users** by implementing a responsive user interface using **React** and **TypeScript**
- Implemented cloud solutions such as AWS Lambda and RDS to scale application infrastructure that maintained web application **system's uptime at 90%** during production and utilized Docker containers for version testing
- Developed the Community Post & Dream Interpretation features on the mobile application- deployed on the App Store

Head STEM Instructor — **Jun 2022 – Apr 2024**
CodeREV Kids / Brains & Motion Education — *Mountain View | Santa Clara, CA*
- Instructed **700+ students** in STEM projects spanning online web application development, game design projects, and robotics utilizing Arduino microcontrollers, breadboards, and Arduino IDE to program student-built robots
- Restructured **10+ sections** of CodeREV Kids and Brains & Motion's curriculums, enhancing student comprehension
- Fostered partnerships with **20+ local businesses**, encouraged real-world application/display of **30+ student projects**

PROJECTS / LEADERSHIP

Steady-State Visual Evoked Potential (SSVEP) RC Car / *Python (Tkinter, Pillow, SciKit-Learn)* — **Nov 2024 – Present**
Software Engineer + Hardware Engineer — *Triton NeuroTech*
- Collected and translated EEG (electroencephalogram) data into RC motion commands with Arduino, and Unicorn Suite
- Developed GUI via Tkinter and Pillow to stimulate specific brainwave frequencies read by Unicorn Hybrid Black Headset
- Enabling motor control of hardware devices solely via brain wave frequencies and visual stimuli for paralyzed patients

Polyglot / TypeScript**,** Wispr.ai API (STT), Play.ai API (TTS), OpenAI API, SupaBase, Docker — **Jan 2024 – Jun 2024**
Software Engineer — *Santa Cruz, CA*
- Leveraged speech-to-text (STT) and text-to-speech (TTS) APIs to enable seamless conversational interactions for users
- Reduced response times by **20%** by streamlining API workflows and focusing on optimizing reducing redundant calls
- Reduced average amount of deployment failures by **30%** through implementing reliable CI/CD pipelines with Docker
- Bridged gaps in current language learning apps via conversational AI embedded in an online language learning platform

Power Tag / *Kotlin, C++, Google Maps API, Blynk API, GSM, Arduino, OnShape, Soldering* — **Oct 2024 – Dec 2024**
Awarded; #1 Best Overall Project — *IEEE Fall 2024 QP*
- Integrated Blynk API into mobile app to send and receive packets over GSM communication from a SIM800L module programmed in C++ with Arduino UNO enabling global internet connection without needing a WiFi connection
- Integrated mobile app location feature with embedded map via Google Maps API and Blynk HTTPS API requests
- Spearheaded team of **6 engineers** meeting **100%** of deadlines via use of various Agile and Scrum methodologies
- Developed power bank with integrated GPS tracking accessible via Kotlin mobile app enabling live location services

AWARDS / CERTIFICATIONS / SCHOLARSHIPS

#1 Best Overall Project - IEEE Fall 2024 QP — **Tau Beta Pi Scholarship** - Engineering Honor Scholarship

#1 Best Empowerment - ACMHacks 2023 — **L1 HPR NAR Certification** - Rocketry

#1 Best UI/UX - CruzHacks 2024 — **#1 Best Beginner Hack** - Wilhacks 2.0

SKILLS / INTERESTS

Languages: TypeScript/JavaScript, C/C++, Java, Python, SQL, R, Kotlin, Dart

Development Tools: Docker, Vercel, AWS, Supabase, Firebase, Google Cloud CLI, Clerk, Roboflow, Git

Libraries/Frameworks: React, Next.js, SvelteKit, Material UI, Pandas, PyTorch, SciKit-Learn, Tkinter, Pillow, Flutter, Zod

Interests: Volleyball, Pickleball, Climbing, Escape Rooms, Cooking, Chess (1900 Elo), Hackathons (Current Streak: 4), One Piece