Ryan Ling

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Education

The University of Texas at Austin — Austin, TX

Bachelor of Science in Computer Science — *Expected December 2028*

- Relevant Coursework: Data Structures, Discrete Mathematics; in progress: Computer Architecture, Probability

Projects

UT Compass | *React Native, Expo, TypeScript* | App Store | GitHub — June 2026 – Present

- Solo-built and shipped an offline-first iOS campus directory and class planner to the App Store, reaching 125+ users within two months of launch, with 100+ still active
- Packed a directory of 175+ campus locations into under 100 KB of JSON so search works with no signal, with real-time building autocomplete and an interactive map for quick adds
- Designed an AsyncStorage-backed local store with validated JSON backup and restore, so a malformed import can't crash the app

Systems & Data Structures Projects | *C, Java* — 2025 – 2026

- Solo-built a dynamic memory allocator in C (malloc/free) with binned explicit free lists, quick lists, coalescing, and a heap checker, reaching 74.9% memory utilization and doubling the throughput target
- Implemented Huffman compression and decompression, plus graph algorithms (Dijkstra's shortest path, path enumeration), in Java

clockPi | *JavaScript, HTML/CSS, Spotify Web API, Raspberry Pi, Linux* | GitHub — April 2026 – May 2026

- Built a multi-view kiosk dashboard for a Raspberry Pi desk clock (800×480 display) with a 3-day forecast, daily quote, alarms, and white noise
- Integrated the Spotify Web API to show real-time now-playing info with playback controls on the dashboard
- Deployed it on Linux (FullPageOS), tuning Chromium GPU flags and audio config to run reliably on a Pi 3A+

Experience

Longhorn Developers — Austin, TX

Developer Fellow, Mobilize UT — *September 2026 – Present*

- Develop features and fixes across the map, navigation, and routing layers of Mobilize UT, an open-source React Native/Expo (TypeScript) app that improves campus accessibility for disabled students
- Maintain third-party routing API integrations, migrating to updated endpoints ahead of a service deprecation to keep navigation reliable for users
- Implement UI redesigns from Figma and refine routing options around accessibility-first navigation
- Selected as one of five fellows on a team led by a tech lead; ship through pull requests, code reviews, weekly syncs, and sprint planning

Think Lab, UT Austin — Austin, TX

Undergraduate Course Assistant, CS 109 — *August 2026 – Present*

- Support 110 first-year CS students across three CS 109 sections through one-on-one and group sessions, 12–15 hours per week
- Lead weekly presentations on CS resources and co-design course content with staff

Languages & Technologies

Languages: TypeScript, JavaScript, Python, Java, C, HTML/CSS
Frameworks & APIs: React Native, Expo, AsyncStorage, Mapbox, Spotify Web API
Tools & Platforms: Git/GitHub, Linux, App Store Connect, iOS, Figma, Claude Code, Raspberry Pi