HUAN TRUONG

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Software engineer and researcher with proven success delivering innovations at Apple, Tesla, and academia. Specializing in pushing hardware boundaries through advanced software and firmware engineering, I have shipped code to billions of devices worldwide. Passionate about advancing digital typography and creating exceptional UX.

Works

- **Apple Inc.** – Senior Software Engineer. Serving billions of users and developers. *2024 – Present*
  - **Contributed the state-of-the-art text rendering, layout, and editing experience** across all of Apple's platforms through the TextKit framework, part of the Cocoa API.
- **Tesla Inc. – CA** – Senior Software Engineer. Exploring new territories. *2018 – 2024*
  - **Led and implemented innovative end-user features**: Right-to-Left layout and text rendering support, Easier-to-read text, new keyboards layouts, Dashcam recording and Bluetooth connectivity.
  - **Took charge of rendering, language, locale, and keyboard features**. Improved OpenType font rendering features, enabled new market penetrations.
  - **Added and fixed numerous APIs in Tesla's Core UI framework** and some APIs in Qt and Harfbuzz to enable new layout and typography features.
  - **Collaborated with Infotainment UI and Product Security** to maintain, design, debug services, system OS packages, and build pipelines to address a wide range of needs.
  - **Wrote daemons** for UI to interact with Bluetooth chip from different vendors to connect with phones in just a few months, adverting automotive industry-wide chip shortage.
  - **Debugged and implemented changes to log and address performance, hardware, software, CAN issues** in the infotainment system OS including legacy and performance-bound systems.
- **University of Missouri, Evolutionary & Network Parallel Systems Lab – MO** – Research Asst. *2012 – 2018*
  - **Worked on and published a number of CUDA-accelerated algorithms**: sequence alignment, taxonomic, genes co-expression patterns.
  - **Conducted research** on filtering noise from multi-dimensional biological data using high-performance computing.
  - **Publications**: Google Scholar Profile: Huan Truong N.H. | Languages: CUDA C, R, Bash, Go.

Education

- **University of Missouri – MO** – Ph.D. in Informatics *Aug 2012 – Jul 2018*
- **Truman State University – MO** – B.S. in Computer Science with Department Honors *Jan 2008 – Dec 2011*

Other Activities & Recognition

- **High Altitude Balloon (HAB) Education – St. Louis, MO** – Co-Founder *2014 – 2018*
  - Provided opportunities for high school students to get involved in STEM by working on HAB launches to near space.
  - Engineered and optimized software & hardware, planned lesson plans, organized workshops and outreach events.
- **Open Source Software Projects** – Highlights
  - Show-me-webcam: Turn a Raspberry Pi to a webcam, created embedded Linux OS that starts up in 3 secs (2021).
  - Crankshaft: Turn a Raspberry Pi to an Android Auto unit. Built a toy Linux distro suitable for automotive use (2018).
- **Other activities** –
  - Discovered a Google security issue, sold a domain, earned a spot on Google Vulnerability Research Hall-of-Fame.