Daohang (Tony) Tong

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EDUCATION

University of California, Irvine   Sep 2016 - Sep 2020
Double Major: B.S. Physics, B.S. Computer Science

SKILLS

Programming Languages: Obj-C, Swift, Python, C/C++, TypeScript/JavaScript, Bash Shell, Haskell, Mathematica
Tools: Cursor, Supabase, PyTorch, SQL, Docker, Django, React, React Native, AWS (EC2, S3, SageMaker, Lambda), GCP, Firebase, MongoDB, Root, LaTeX

WORK EXPERIENCE

Software Engineer   San Diego, CA
Apple   Nov 2022 - Present

· Improved iCloud end-to-end encryption infrastructure reliability using data driven approach on iOS/macOS/visionOS/tvOS
· Architected and maintained a privacy centric and high performant telemetry system
· Improved Apple Account sign-in reliability and performance on HomePod and Apple TV
· Prototyped multiple internal tools with LLM agents and MCPs; Led team internal efforts to onboard and configure LLM coding and PR review systems
· Led cross-functional effort with customer centric approach with partners in other organizations to create alignment on projects

Lead iOS Developer   Anaheim, CA
AiTmed - Supervisor: Austin Yu   July 2021 - Nov 2022

· Developed 2 ECC end-to-end (e2e) encrypted apps for users to give/receive medical care with features such as telemedicine conferencing with auto-disconnect, personal index for fuzzy search, and secure password reset
· Architected a cross-platform frontend engine on iOS using swift MVVM to parse and run a customized UI description language
· Enabled concurrency with DispatchQueue and RxSwift; debugged and fixed thread-unsafe data handling issues
· Used gRPC to retrieve data and improved loading speed by 40% with multi-level frontend cache with NSCache and SQLite
· Optimized the app's memory footprint and by 52% with heap profiling, image compression and view controller management
· Built a push notification and VoIP callkit system with FCM and APNs with click-to-jump to improve the user experience
· Led a team of 4 developers to coordinate engineering effort and the design team to deliver >3 new features/week
· Improved CI/CD tooling with bash scripts, git submodule and unit testing, saving at least 4 hours per deployment

Co-Founder/CTO   Irvine, CA
Digerini - Partner: Richard Brazill   Jan 2021 - Nov 2022

· Invented key algorithms for a patent application to battle against phone call scams; Responsible for architectural road-maps for both ML and full-stack app; Launched MVP to iOS TestFlight in 1 month
· Developed an iOS app with React Native and Python Django with MongoDB that are deployed on AWS
· Built a prototypical dilated convolutional neural network to perform few-shot learning on audio data to replace SOTA
· Led five developers with Agile Scrum; Sped up team onboarding by 50% with automated documentation from annotated code

Jr. Specialist   Irvine, CA
UCI & CERN ATLAS - Advisor: Prof.Daniel Whiteson   July 2020 - July 2021

· Co-authored *Learning to Identify Electrons*, improved SOTA by 3% with CNNs, accepted in [Physical Review D.](#)
· Automated the data generation and monitoring pipeline on a cluster with Python, speeding up the process by 10x
· Constructed group equivariant neural network with symmetry constraints to be more efficient and interpretable

Deep Learning Engineer Intern   Irvine, CA
Fixstars Solutions - Supervisor: Takuro Iizuka   Apr 2019 - Jun 2019

· Computed the 13 measurements (e.g. distance between cars) in CARLA simulator with Python and C++; developed a command line interface to automatically collect data (⭘ [fixstars/ALUAD](#))
· Developed multiple deep neural networks using PyTorch and distributed them on GPU clusters
· Computed various measurements in CARLA simulator with Python and C++; developed data collection CLI