



DAVID LU

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luguowei.com/doodles

EXPERIENCE

Software Engineer at **Google** – 2016 to 2022

- Responsible for building web app frontends and games on Google homepage ([Doodles](#))
 - Hundreds of million of plays and centuries of playtime on aggregate
- Architect of Entity-Component-System game engine used in most large doodles
 - Designed CreateJS-based SDK and plug-ins integrated into Adobe Animate
 - Directed team of artists and engineers in ECS development paradigm
- Improved infrastructure for serving and monitoring Doodles on top of Google Search
- Implemented multiplayer game servers and matchmaking servers in Kubernetes
- Applied GCP cloud functions for achievement tracking and global leaderboards
- Designed and ported mobile native experiences for Google Search App
- Lead engineer and Game Designer for [2021 Doodle Champion Island Game](#)
 - Primary designer for questing, dialogue, achievement and physics system
 - Developed several sports minigames and overworld game
 - Largest doodle in history in terms of scope, playtime and games played per day
- Lead Engineer on [2017 Hip Hop Doodle](#) featuring DJ Turntable audio editor app
 - Implemented vinyl scratching interface, beat-matching functionality, multichannel crossfaders and mobile/chromeOS multitouch
- Project Lead and designer for [2021 Pizza Doodle](#) and [2020 Wackeldackel Doodle](#)
- Engineer and Game Designer for various doodles such as... [Fourth of July](#), [Rio Olympics](#), [Bunny Coding](#), [Ghoul Duel](#), [Maya Angelou](#), [Google Pinball](#)... among others

Concept Artist at **Nickelodeon** - 2022 to 2024

- Designed props, backgrounds, characters and color keys for the Plankton Movie and Transformers EarthSpark

EDUCATION

University of Toronto at St. George, Computer Science – 2012 to 2015

- Honours Bachelor of Science, specializing in Machine Learning
- Selected Courses: Artificial Intelligence, Deep Learning, Machine Learning, Neural Nets

SKILLS

Language: C++, C#, Dart, Java, JavaScript/TypeScript, Objective-C, Python, SQL, Swift

Web: Django, Docker, FastAPI, Firebase, Flask, GCP, Kubernetes, nginx, Node.js, ReactJS

Mobile: CreateJS, Flutter, React, Unity

Software: Android Studio, Animate, Blender, GitHub, Maya, Photoshop, PyCharm