David Chen

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(US Citizen)

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EDUCATION

Carnegie Mellon University: School of Computer Science, Pittsburgh, PA.   Incoming
- MS in Machine Learning.
- Research Advisor: **Prof. Max Simchowitz**

Stanford University: Center for Global & Online Education, Stanford, CA.   2022 - 2025
- Part-time: AI Graduate Certificate Path. GPA: 4.3/4.3

Carnegie Mellon University: School of Computer Science, Pittsburgh, PA.   2017 - 2021
- BS in CS, Minor in Math. GPA: 3.95/4.0

INDUSTRY EXPERIENCE

Meta, Menlo Park, CA. *- SWE*   2021 - Present
- Product software engineer for FB Notifications and FB Feed Experience Infra.
- Drove multiple large-scale projects resulting in major engagement increases for Facebook notifications, birthdays, widgets, and comments.
- Went above and beyond in researching, implementing, documenting, and presenting a solution for a complex Facebook bug resulting in an additional **3 million daily comments**.
- Collaborated with data scientists and conducted independent data analysis for **hundreds** of experiments in order to verify impact and influence direction.
- Led Java to Kotlin conversion efforts across all Android engineers in the notifications org, reaching **100%** Kotlin goal **1 year ahead of schedule**.
- Mentored multiple teammates and managed an intern.

Facebook (AR/VR), Menlo Park, CA. *- SWE Intern*   2020 Summer
GoDaddy, Kirkland, WA. *- SDE Intern*   2019 Summer
Akamai Technologies, Cambridge, MA. *- SDET Intern*   2018 Summer

EXCERPT OF RELEVANT PROJECTS

Stanford: CS234 Reinforcement Learning Final Project   2024 Spring
- Project mentor: **Prof. Emma Brunskill**
- Discovered and evaluated flaws in existing Decision Transformer research relating to the "trajectory stitching" issue.
- Extended research on the Waypoint Transformer approach, with potential improvements on benchmarks and better understanding of the importance of waypoint location.

Stanford: CS230 Deep Learning Final Project   2022 Spring
- Extended research on satellite image machine learning (SIML) through multi-task learning on ResNet models.
- Extended application of the model to inference of self-storage facility prices.

CMU: 15-688 Practical Data Science (Master's Level) Final Project   2019 Fall
- Explored subreddit classification from post content, performed additional analysis through clustering techniques.

HACKATHON PROJECTS

CMU TartanHacks: s t r e t c h e d   2019 Spring
- **Grand Finalist** for CMU TartanHacks.
- Cooperative, 3D puzzle game with an environment stretching as the main mechanic.

GoDaddy: ReSocial   2019 Summer
- **Customer Innovation category winner** for GoDaddy's Intern week hackathon.
- Website dashboard for businesses to monitor online reviews, built with React.

RESEARCH EXPERIENCE

Carnegie Mellon University: School of Computer Science, Pittsburgh, PA. *- Student*   Incoming
- Independent Study:
    - Supervisor: **Prof. Max Simchowitz**
    - Summer preparation:
        - Reproducing and extending recent research related to **Diffusion Policy Policy Optimization** and **Diffusion Forcing**.

Carnegie Mellon University: School of Computer Science, Pittsburgh, PA. *- Student*   2018 - 2020
- Counterspace Games - Research Producer *(2019-2020)*
    - Supervisor: **Erica Cruz (PhD)**
    - Coordinated team of undergraduates in development of game prototypes.
    - Developed multiple prototypes using Unity game engine.
    - Conducted interviews, organized meetings, organized prototyping sessions.
- Research in Partitioning-based approaches for Maximum Satisfiability *(2018)*
    - Supervisor: **Dr. Ruben Martins**
    - Devised and implemented preprocessing techniques for MaxSAT solvers and analyzed impact on performance for competition benchmarks.

COMPUTER & PROGRAMMING SKILLS
- Proficient in **Python**, **Java**, **Kotlin,** JavaScript, C, C++, SQL, LaTeX, Typst, etc.
- Familiar with PyTorch, Android, React, and many other frameworks.
- Game development with Unity Engine.

RELEVANT CS & MATH COURSEWORK
- 15-441: Computer Networks
- 15-462: Computer Graphics
- 10-315: Machine Learning
- 10-403: Deep Reinforcement Learning and Control
- 15-688: Practical Data Science
- 21-261: Introduction to Ordinary Differential Equations
- 21-341: Linear Algebra
- 21-355: Principles of Real Analysis I
- 21-373: Algebraic Structures
- 15-317: Constructive Logic
- CS230: Deep Learning
- CS234: Reinforcement Learning
- STATS200: Statistical Inference
- STATS217: Introduction to Stochastic Processes I
- *Many more courses I could not fit here*

OTHERS/HOBBIES
- Personal website: davidjgchen.github.io
- Self-studying and reviewing math and theory:
    - Current interests: real analysis, probability theory, multi-armed bandits.
- Successfully quit League of Legends.
- Cocktail and coffee enjoyer.
- Typst (alternative to LaTeX) enthusiast!