# Anthony Zhou

+1 (682) 228-9135 | New York, NY | anthony.zhou03@gmail.com | github.com/anthony-zhou | anthonyzhou.com

## EDUCATION

**Columbia University** New York, NY
*B.A. in Computer Science, Columbia College* *Sep 2021 — May 2025*

- Cumulative GPA: 3.99/4.0 | Dean's List
- **Relevant Coursework:**
  - ‣ **Humanities**: US Political Economy, Contemporary Civilization, Cognitive Science
  - ‣ **Mathematics**: Probability, Computational Linear Algebra, Modern Analysis
  - ‣ **Computer Science**: Natural Language Processing, Analysis of Algorithms, Data Structures, Distributed Systems

**Oxford University** Oxford, UK
*Visiting Student in Experimental Psychology, St Edmund Hall* *Jan 2024 — Jun 2024*

- Relevant Coursework: Perception, Memory & Cognition, Social Psychology

## WORK EXPERIENCE

**Reazon Human Interaction Lab** Jun 2024 — Aug 2024
Project Lead *Tokyo, Japan*

- Proposed and developed a home fitness device for older adults from scratch in 10 weeks.
- Managed $1 million R&D budget and team of 6 to design, develop, and test the product.
- Deployed IR remote control interface, Japanese speech and transcription APIs, and ML rep counting system.
- Tested the hardware product via in-depth interviews with 20+ older adults in Japan and pitched to company executives.

**Learning the Earth with AI and Physics (LEAP) Center at Columbia University** Jun 2023 — Dec 2023
Research Intern *New York, NY*

- Led project to modernize climate modeling code, resulting in published paper and presentations at NeurIPS 2023 and NCAR.
- Translated complex photosynthesis module from Fortran to Python/JAX as proof-of-concept for modernizing 500k-line codebase.
- Developed automated translation pipeline using static analysis and large language models.
- Implemented gradient-based parameter optimization for key biological variables.
- Achieved 100x speedup through GPU parallelization of core numerical algorithms.

**Snow Labs** Oct 2021 — Aug 2022
Co-Founder, CTO *Menlo Park, CA*

- Received $50,000 in funding as part of Floodgate Fund's startup incubator program.
- Conducted 50+ customer interviews to understand market needs in consumer social and climate tech.
- Launched a social curation app for books, movies, and restaurants with 100+ users within 1 month.
- Prototyped a low-cost sensor network for community-level air quality monitoring and secured 10 paid preorders.

**Big & Mini** Apr 2020 — Apr 2022
Co-Founder, CTO *Austin, TX*

- Founded bigandmini.org to combat social isolation by matching elderly and young people for video conversations.
- Led team of 5 engineers to develop web and mobile apps, implementing serverless architecture and NoSQL database.
- Built core features including user accounts, messaging, matching system, and analytics dashboard.
- Scaled to 6000+ users from 60 countries and secured $100k+ in funding.
- Featured in 20+ major media outlets including The Today Show, the New York Times, and the Washington Post.

## COMMUNITY SERVICE

**Big & Mini** Apr 2020 — Apr 2022

- Co-founded and developed an online platform connecting young and elderly adults during COVID-19 to combat social isolation.
- Scaled from a concept to a community that facilitated thousands of intergenerational connections.

**Columbia Effective Altruism** Sep 2021 — Dec 2022

- Designed and led Effective Environmentalism Fellowship program for 30 students across two discussion sections.
- Developed comprehensive curriculum on environmental interventions and impact analysis.
- Co-facilitated AI Safety and Introductory EA Fellowship sections, leading discussions on emerging technologies and effective giving

**Khan Academy Translation**                                                    Aug 2018 — Aug 2021
- Translated 150,000+ words of educational content in computer science, physics, and math from English to Simplified Chinese.
- Reviewed 40,000+ words as proofreader, providing detailed feedback to improve translation quality.
- Dedicated 140+ hours to expanding access to free STEM education for Chinese-speaking students.

## TEACHING EXPERIENCE

**Technical Workshop Lead, Columbia DevFest**                                   Aug 2023 — Jan 2024
- Designed and taught workshop curriculum for 100+ students on full-stack development fundamentals.
- Led team of 10 teaching assistants to develop interactive coding exercises and mentorship program.
- Created hands-on web development curriculum covering React, Python, and cloud deployment.

**Teaching Assistant, Analysis of Algorithms**                                  Sep 2023 — Dec 2023
- Held weekly office hours providing one-on-one help with algorithm design and complexity analysis.
- Collaborated with course staff to grade assignments and exams for 150-person upper-level CS course.

## PUBLICATIONS & PRESENTATIONS

Publications:
- **Zhou, A.**, Hawkins, L., Gentine, P. (2024). "Proof-of-concept: Using ChatGPT to Translate and Modernize an Earth System Model from Fortran to Python/JAX." arXiv:2405.00018.
- Xu, L., Fields, N.L., Chen, Z., **Zhou, A.**, et al. (2022). "Big and Mini: A Promising Intergenerational Program for Social Connections." International Journal of Environmental Research and Public Health, 19(8), 4566.

Conference Presentations:
- "AI-Assisted Translation of Climate Models" - NeurIPS 2023 Climate Change Workshop (Poster)
- "Modernizing Legacy Climate Models" - National Center for Atmospheric Research (NCAR) Working Meeting, July 2023

## AWARDS

- 2021 Fowler Global Social Innovation Challenge (GSIC) - Second Place
- Dean's List (2021-2023)
- AWS US University Startup Competition Winner (2020)
- Points of Light Youth Summit Pitch Contest Winner (2020)
- Prudential Spirit of Community Award (2021)

## SKILLS

- **Scientific Computing**: NumPy, SciPy, JAX, Pandas, Matplotlib, scikit-learn
- **Programming Languages**: Python, JavaScript, C++, Java, SQL, Golang, Dart, Elixir.
- **Frameworks**: PyTorch, React, Next, Tailwind, Flutter, Node, GraphQL, Serverless, FastAPI.
- **Developer Tools**: Git, Bash, UNIX, Docker, PostgreSQL, Vercel, AWS (Lambda/Dynamo/EC2).