# Anrui (Allie) Gu

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**EDUCATION
University of California, Berkeley Berkeley, CA** Bachelor’s Degree – Computer Science, minor in Bioengineering *December 2022*
Overall GPA 3.831/4.0

**Relevant Courses:** Machine Learning, Deep Learning, Instrumentation in Biomedicine; **Coursera Modern Robotics (Northwestern University):** robot motion and kinematics; Signals and Systems, Artificial Intelligence, Optimization, Probability and Random Processes, Data Science, Computer Architecture, Data Structures and Algorithms, Microeconomics, Macroeconomics.

**EXPERIENCE**

**Stealth Digital Health Startup Austin, TX**

*Software Engineer Intern May 2022 – Present*

* Created configurable content-based recommendation engine with custom cost functions to integrate with Rails app and match users regularly with health products and dynamically update based on purchase behavior
* Created server-side solution to pass information through stakeholder sites, enabling core business model

**Microsoft Xiaoice Beijing, China**

*Machine Learning Research Intern May 2021 – July 2021*

* Ran MusicVAE, PopTransformer, and TransformerVAE paper code to generate both long-range and multi-layered samples that improved decision-making for music editor project

**Economics Professor Nick Tsivanidis’s Development Research Team Berkeley, CA**

*Deep Learning Research Assistant January 2021 – May 2021*

* Trained a U-Net on satellite images using a high-performance computing Linux cluster
* Generated, clipped, and organized inputs with ArcGIS and Colab

**Economics Professor Clair Brown’s Divestment Research Team Berkeley, CA**

*Data Analysis Research Assistant September 2020 – December 2020*

* Published a Fossil Free California report analyzing 2018-19 investments with Pandas visualizations by sector and type; merged, cleaned, and conducted statistical tests of different asset classes

**PROJECTS**

* **Software consultant, Neurosity (2022):** Building a music recommendation feature from raw brain wave data using latent factor analysis and deep learning
* **Drone Safety Algorithms, Immersive Semi-Autonomous Aerial Command System (2021):** brought A\* and RRT\* path planning algorithms from 3d to 4d to find and visualize optimal drone obstacle avoidance paths.

**SKILLS**

PyTorch, C++, Java , Pandas, Scikit-learn, Matplotlib, , Linux, CUDA, ROS, SQL, R, CAD

**LEADERSHIP**

**Curriculum Committee Chair - Berkeley ANova** *2020*

* Taught Oakland middle school students introductory computer science and coding every week
* Adapted, enhanced, and published the curriculum project-base for a virtual semester

**Team Lead - Data Discovery Exchange** *2020*

* Recruited a group of Data Science students to build a Streamlit web app of time-series analyses and an SIR model for spread of disease from small business and Covid-19 data

**VP of Business Development - California China Summit** *2019 –2020*

* Successfully put together the Film & Entertainment Panel that garnered a live viewership of 755,000

**PERSONAL**

Composed and performed a musical theatre song at Berklee. Speak intermediate German and love German musicals. Big science fiction fan. Can do one Chinese martial arts straightsword form. Member of Berkeley chapter of NeurotechX.