

Luna Yue Huang

Economics | Machine Learning | Geospatial Analysis

CONTACT

📧 luna-yue-huang.com
 ✉ yue_huang@berkeley.edu
 ✉ lunahuang@google.com
 ☎ 510.701.3560
 in luna983 🌐 luna983

EDUCATION

UC BERKELEY

PHD (DEVELOPMENT ECONOMICS)

GPA: 3.8

2016–Present | Berkeley, CA
 Expected graduation: May 2021

PEKING UNIVERSITY

BA & BS (ECONOMICS &
 ENVIRONMENTAL SCIENCES)

2012–16 | Beijing, China

COURSEWORK

Applied Econometrics II/III
 Applied Machine Learning
 Probability and Statistics
 Development Economics I/II
 Applied Industrial Organization
 Economic Theory (Micro & Macro)

SKILLS

Python (& PyTorch) • R • SQL
 Google BigQuery • D3.js • QGIS
 Google Cloud Platform • Bash • Git

REFERENCE

Edward Miguel

Professor of Economics, UC Berkeley
 emiguel@berkeley.edu

Marco Gonzalez-Navarro

Associate Professor of Agricultural and
 Resource Economics, UC Berkeley
 marcog@berkeley.edu

Solomon Hsiang

Professor of Public Policy, UC Berkeley
 shsiang@berkeley.edu

WORK EXPERIENCE

GOOGLE X

Data Scientist
 AI Resident

Aug 2020–Present
 May 2020–Aug 2020

- Led the data team in a confidential X project.
- Initiated and pursued data partnership with 4 other Google teams, and 3 external companies.
- Conceptualized, designed and implemented a data pipeline that ingests, harmonizes and feature-engineers over 150 billion raw data records in 22 disparate datasets from external and Google internal sources.

RESEARCH EXPERIENCE

MAPPING HISTORICAL CLIMATE MIGRATION WITH 1.6 MILLION AERIAL PHOTOGRAPHS

lead author

- Created the first high-resolution maps of human settlements for 1940–70 from historical aerial photographs taken by decommissioned British spy planes. This fills a critical data gap for research on climate change induced mass migration in the past century.
- Invented a computer vision algorithm that automates large-scale aerial photo co-registration, reducing manual labor required for georeferencing by 98.8%. [🌐 GitHub Repo](#)
- Trained, tuned and deployed deep learning models (DeepLabV3 and D-LinkNet) to extract historical building footprints and road networks, achieving state-of-the-art performance despite small training samples.

THE EFFECT OF LARGE-SCALE ANTI-CONTAGION POLICIES ON THE COVID-19 PANDEMIC (NATURE, 2020)

- Led the data collection and econometric analysis for China.
- Estimated that large-scale social distancing policies prevented or delayed approximately 61 million COVID-19 confirmed cases in the US, China, Italy, France, South Korea and Iran.
- Published on *Nature*, reached the White House (Office of Management and Budget) & CDC, cited 115 times within three months of publication, and covered in 322 news stories by outlets including CNN, the Washington Post, New York Times, NPR, and Reuters. [📄 Paper](#)

MEASURING THE EFFECTIVENESS OF POVERTY ALLEVIATION PROGRAMS FROM SPACE

job market paper

- Measured housing quality from satellite imagery with a deep learning model (Mask R-CNN), and inferred poverty measures with Engel curves. [🌐 GitHub Repo](#)
- Evaluated a randomized controlled trial (RCT) on anti-poverty cash assistance in Kenya with satellite imagery, and obtained consistent results with extensive in-person surveys.
- Illustrated the possibility of dramatically reducing the cost of program evaluation in the field of international development.