

DANIEL KAO

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education

UW MADISON

September 2021 - December 2023
M.S. Cartography and
Geographic Information Systems

UC SAN DIEGO

September 2012 - June 2016
B.S. Computer Science

NYU SPS

January 2017 - June 2017
Cybersecurity Certificate

skills

PROGRAMMING

Node.js, Svelte, React, Vue, Next.js,
Typescript, Python, GraphQL

DATA VIZ / GRAPHICS / GIS

D3, QGIS, MapboxGL, ArcGIS, GDAL,
OG2OGR, WebGL, Three.js, REGL

LANGUAGES

English (Native Speaker)
Chinese (Professional Proficiency)

writing

DIPLATEEVO

(diplateevo.com)

A blog on data journalism, graphics, and
web engineering.

open source

SCROLLYVIDEO

(github.com/dkaoster/scroll-video)

A React, Svelte, and Vue library built with
WebCodecs and Canvas that allows any
video to be used for "scrollytelling". Used
in many news organizations such as
ProPublica and more.

*other open source libraries available on
my github

experience

SENIOR SOFTWARE ENGINEER

[The Washington Post \(washingtonpost.com\)](https://www.washingtonpost.com)

May 2023 - Current

- Led a team of three junior frontend engineers to build live frontend architecture and components for the 2024 US primary and general elections.
- Rebuilt the mapping software stack from the ground up, utilizing open source technologies such as MapLibre GL JS, PMTiles, and vector and raster tiles.
- Scaled the frontend architecture to support millions of page views over a single night to 600+ elections results pages.

DESIGN TECHNOLOGIST

[Stamen \(stamen.com\)](https://stamen.com)

March 2022 - April 2023

- Worked with The San Francisco Exploratorium to create an interactive touchscreen exhibit with a map of plants in California.
- Worked with The Wilderness Society to create a web-based geospatial analysis tool to aid all Wilderness Society employees in research.
- Built tools with MPG Ranch to understand biospheres for ecologists and education.

SENIOR GRAPHICS ENGINEER

[Commonwealth Magazine 天下雜誌 \(cw.com.tw\)](https://commonwealthmagazine.org)

March 2020 - February 2022

- Built graphics and infrastructure for live election results, used in multiple local and national Taiwanese elections.
- Significantly accelerated production time, allowing most large interactive projects to be completed within 1-2 weeks.
- Reorganized workflows for design, engineering, and editorial staff around publishing visual storytelling formats.
- Built an internal component library for quick development of story formats.
- Built an internal data pipeline for easily archiving, combining, and analyzing large amounts of data.

GRAPHICS ENGINEER

[The News Lens 關鍵評論網 \(thenewslens.com\)](https://thenewslens.com)

April 2019 - March 2020

- Led the digital efforts around the 2020 Taiwanese Election, including a poll aggregator, live election tracking, and election results analysis.
- Architected, engineered, scaled, and maintained a full stack graphics system based on Svelte, Sapper and hosted on Google Kubernetes Engine.
- Collaborated with editors to report on the protests in Hong Kong, 30 years after Tiananmen Square, and various other interactive articles.
- Created tools to help designers plug data into their graphics, saving time around doing menial and repetitive work.

SOFTWARE ENGINEER

[The New York Times \(nytimes.com\)](https://www.nytimes.com)

June 2016 - March 2019

- Prototyped, tested, and launched a new home page with hundreds of users.
- Assisted in the creation of Project VI, the sixth-generation front end of the New York Times, based on React and GraphQL.
- Built a new user interface for internal A/B testing, making QA processes more efficient.
- Built a newsletter and the infrastructure powering it called Your Weekly Edition that sends a weekly, personalized recommendations for every subscriber.
- Ran the Open Speaker Series, a monthly professional development forum for internal and external speakers.
- Launched NYTimes over TOR, a site on TOR Hidden Services to allow readers access the New York Times over TOR.