# JJ Geewax

## Software Engineer

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## EXPERIENCE

### Principal Software Engineer
**Payments - Google**
Singapore — Jan 2020 to present

Our team in Google Payments focuses on open-source systems for governments and central banks to power real-time digital payments around the world. In addition to providing technical guidance on payment infrastructure, a key goal is to encourage adoption.

**Responsibilities**

- Overseeing work on Mojaloop's third-party payment initiation integration.
- Advising governments, central banks, and regulators on real-time payment systems, including FedNow (US), NPP (Australia), Pix (Brazil), IPN (Egypt), etc.
- Advising the GPay team on API design and third-party integrations in new markets (Japan, Brazil, etc)

### Senior Staff Software Engineer
**Google Cloud Platform - Google**
New York, NY — Dec 2013 to Jan 2020

Google Cloud Platform allows the world to use Google's internal computing, storage, networking, ML, and data analysis infrastructure via a suite of APIs. GCP provides virtualized infrastructure to a variety of companies including SnapChat, Spotify, PayPal, Twitter, Bloomberg, The New York Times, Scotiabank, AirAsia, and HSBC.

**Responsibilities**

- Overseeing all API Design decisions across Google
- Designing and building client libraries for GCP APIs spanning multiple programming languages (Python, Java, Node.js, Ruby, PHP, C++, Go)
- Auditing and improving usability for GCP APIs

### Software Engineering Manager
**Display Advertising - Google**
New York, NY — Jun 2010 to Dec 2013

After Google's acquisition of Invite Media in 2010, we needed to migrate from Amazon's EC2 to Google's internal infrastructure, rebranding as DoubleClick Bid Manager. This had to be a smooth transition despite the significant growth in both traffic and data throughout the transition period.

**Responsibilities**

- Overseeing the technical migration to Google infrastructure and preserving system stability.
- Coordinating with clients in the US and Europe.

### Vice President, Engineering
**Invite Media**
Philadelphia, PA — Jan 2008 to Jun 2010

Invite Media created Bid Manager, the first "universal buying platform" for display advertising, allowing agencies to target users using real-time bidding across multiple ad exchanges. Invite Media's ad serving system handled hundreds of thousands requests per second across several thousand virtual machines, while processing several terabytes of data per day to produce useful reporting and analytics.

**Responsibilities**

- Management of the software engineering team (split between Philadelphia and New York)
- Overseeing technical implementation of the system UI

## ORGANIZATIONS

**AIP.dev**
Founder — Mar 2019 to present
aip.dev

**Mojaloop Foundation, Technical Governing Board**
Member — May 2020 to present
mojaloop.io/foundation/leadership/

**BIS, Project Rosalind, API Advisory Group**
Member — Aug 2022 to present
bis.org/about/bisih/topics/cbdc/rosalind.htm

**Open Government Products, Board of Advisors**
Member — Oct 2022 to present
open.gov.sg

## EDUCATION

**University of Pennsylvania**
BS, Computer Science Engineering
Sep 2005 to Jun 2008

## PUBLICATIONS

**Google Cloud Platform in Action**
632pp, Manning Publications (2018)
amazon.com/Google-Cloud-Platform-Action-Geewax/dp/1617293520/

**API Design Patterns**
480pp, Manning Publications (2021)
amazon.com/API-Design-Patterns-JJ-Geewax/dp/161729585X/

**Design Principles for Third-party Payment Initiation in Real-time Payment Systems**
Google (2021)
drive.google.com/file/d/1IQNUTkcYoj1v0hUgU0xlT2czGW0GDwx5/view