# Max Geng

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## EDUCATION

**Columbia University** — New York, NY
*Master of Science in Electrical Engineering; GPA: 3.63* — Sep. 2020 – Dec. 2022

**City University of Hong Kong** — Hong Kong, HK
*Bachelor of Engineering in Electronic & Communication Engineering; GPA: 3.72* — Aug. 2016 – July. 2020

## WORK EXPERIENCE

**Amazon Web Service** — Seattle, WA
*Software Engineer Intern* — Jun 2022 - Aug 2022

- Designed the entity attribute modification approval system for the AWS commerce platform entity console to help product managers to edit the AWS cloud sellers.
- Designed the API models for the system.
- Set up the service infrastructure with AWS CDK, API Gateway, Lambda and DynamoDB.
- Implemented backend lambda package with the integration of Amazon Approval Service.
- Built AWS Commerce Platform entity console dashboard pages with React and Amazon Polaris component library.

**China Construction Bank** — Shijiazhuang, CN
*Software Engineer Intern* — Jun 2020 - Aug 2020

- Implemented and delivered stable admin management system for over 7000 internal users in CCB.
- Developed user login verification front end with React .
- Implemented user record management module in management system with SpringBoot  MySQL.

## PROJECTS

- **CU Lion Net Campus BBS** — Mar 2022 -May 2022
  *CU Lion Net is an AWS cloud-based campus bbs website specially designed for Columbia University students to share studying and life experiences and communicate via blogs.*
  *Backend Development*

  - Created user login widget with AWS Cognito to operate new user sign up and existing user sign on services.
  - Designed database schema with DynamoDB to store data for different services.
  - Built Restful API with API Gateway to realize interaction between backend and frontend.
  - Implemented Lambda Functions to manage web service logic.

  *Frontend Development*

  - Applied vue.js to build whole front-end application.
  - Built web pages with Vue.

- **Gomoku game based on AlphaZero** — Mar 2022 -May 2022
  *Gomoku is a board game web application based on AlphaZero algorithm. In this application, players can play the Gomoku game with the pre-trained AlphaZero AI model or watch AI models play with each other.*
  *Backend Development*

  - Implemented AlphaZero algorithm with Pytorch and trained models. And reduced the training loss by replacing original 3-layer DNN with ResNet-18.
  - Built Flask RESTful APIs for model service supporting such as RL model uploading, player decision making, result feedback, etc.

  *Frontend Development*

  - Built Electron desktop game apps with React.

## PROGRAMMING SKILLS

- **Languages**: Java, Python, C++, JavaScript, SQL, Smithy          **Cloud Platforms**: AWS, GCP
  **Tools**: Git, VIM
  **Frontend Frameworks**: React, Angular          **Backend Frameworks**:SpringBoot, Flask, Dagger
  **Deep Learning Frameworks**: Keras, Tensorflow, PyTorch