# WOOHYUN MICHAEL JO

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## EDUCATION

**B.A. Computer Science** | **University of California, Berkeley**
Graduation Term (Projected): Spring 2024
GPA: 3.9 / 4.0

**Relevant Coursework** | Computer Programs, Computer Security, Data Structures, Discrete Mathematics & Probability Theory, Database Systems, Machine Structures, Artificial Intelligence, Information Devices and Systems, Machine Learning, Efficient Algorithms and Intractable Problems

## SKILLS

Python, Java, C/C++, Go, SQL (MySQL), Apache Hive, HTML/CSS, JavaScript, Flask, Django, x86 MIPS, Lisp, Creative Cloud

## WORK EXPERIENCE

**TIKTOK** | Software Engineer Intern — May — August 2022
Backend – Risk Data Mining – SQL, Apache Hive, Python, Pandas DataFrames

- Engineered empirical evaluation metrics to improve antispam precision, eliminate resource waste, and identity faulty rules in TikTok's rule-based business risk detection system.
- Created a visual analysis tool to develop an SOP (Standard Operating Procedure) for batch rule retirement.
- Established a modularized risk defense solution by connecting Python machine learning algorithms with TikTok's backend data platform—Dorado, Aeolus, Shark; reduced manual workload on initiating risk controls on new business, risk area, or abusive means.
- Built rules and algorithms to mitigate business risks, specifically targeting abusive accounts, fake engagements, spammy redirection, and scraping in ByteDance products and platforms.

**FASOO** | Software Engineer Intern — June — August 2021
Full Stack – Cybersecurity – Python, Django, MySQL, SQLite

- Constructed a user-authenticated Python Flask web application with intentionally hidden security vulnerabilities — Project PyFlaGoat.
- Deployed a securing mechanism to remediate every OWASP vulnerability in PyFlaGoat.
- Tested, implemented, and improved static Python checkers in Sparrow SAST, an intelligent application security testing solution.

## PROJECTS

**AccuLimit** | git.io/J1kEB — August 2021
Personal Project • Python

- Created a Darwin application that protects the host's battery health by modifying the root SMC and limiting the maximum battery charge.

**PyFlaGoat** | git.io/J1kEz — June 2021 — August 2021
Professional Project (Fasoo) • Python, Flask, SQL, HTML5, CSS3, JS

- Developed an intentionally vulnerable Flask application to test, improve, and update Sparrow, an intelligent S/DAST testing engine.
- Integrated an eminent defense portfolio—SonarQube detects 0% of the hidden security flaws of PyFlaGoat that Sparrow is now able to detect.

**Genie Music Scrapper** | git.io/J1kEV — July 2021
Personal Project (Browser Extension) • JS

- Implemented a browser extension that executes JavaScript commands to compile Genie Music playlists into classified plain text lists.

**Portfolio** | git.io/J1kEo — March 2021 — Present
Personal Project (Website) • Bootstrap, HTML, CSS, JavaScript

- Built a static portfolio website using Bootstrap, HTML, CSS, and JavaScript at woohyunmjo.com.

**Gitlet** | git.io/J1kEA — March 2021 — April 2021
Course Project (CS 61B: Data Structures) • Java

- Implemented a version-control system that employs hashed file serialization to mimic some of the basic features of the popular system Git.

## RECOGNITION

**UPE Computer Science Honor Society** | PR Committee — September 2021 — Present
**Ra-On (KA Rock Band)** | Lead Guitarist — September 2021 — Present
**Habitat for Humanity (HFH)** | President, Volunteer Coordinator — September 2017 — May 2020
**Cornell-Yonsei Forensics Invitational** | Grand Champion — July 2018
**Global Youth Entrepreneurship Challenge** | Winner — May 2018