# **Jason Feng**

# **Oracle Certified** Java Developer

#### **Jason Feng**

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#### **Projects**



# Kirby Lore Bot

Java (Java-Discord API), Gradle February 2021 - Present Self-authored Discord bot used by over 200 people, packed with image generation, daily API calls and notifications, a reminder system, and a work-in-progress AI chatbot

# Sierra Competitive Programming Exhibition

Markdown, HackerRank, GitHub August 2023 - Present ICPC/CodeWars style contests with the goal of introducing peers to the world of competitive programming, with self-written challenges of various difficulty and spanning many algorithms https://jasonfeng365.github.io/scpe

# Cat and Mouse 4

Unity, Waveform, Blender May 2023 - August 2023 Side-scrolling platforming RPG with completely original music, art, models, and animations, inspired by a childhood game and going through many iterations, such as Scratch and Java https://jasonfeng365.github.io/catandmouse4



# Error Propagator

Java (Robot), Word

September 2022

Parses an equation, generates equations to propagate the error of variables, and types it in Microsoft Word format, to automate a tedious part of physics lab reports



#### Class Search API

Node.js (Axios, Express) June 2022 - July 2022 REST API that returns information from the Sierra College class search website, in JSON format

#### Skillset

#### Languages

Java 11, Python 3, JavaScript, Node.js, C/C++, C#, ARM, HTML

#### Frameworks and Engines

Java-Discord API, Spring, Axios, Express, Vue.js, AngularJS, Bootstrap, Unity

#### **Databases**

SQL, PostgreSQL, Neo4j

IntelliJ, Eclipse, Visual Studio Code, CodeLite

#### Other

REST APIs, Gradle, AWS, Postman, GitHub

I aim to gain hands-on experience in the development field, where I can grow and apply my problem-solving skills. I am looking for a position where I can make real contributions to the team, learning in the process.

#### Work and Volunteering Experience

#### Code Ninjas Rocklin - Lead Code Sensei SEPTEMBER 2021 - PRESENT

Taught game development in Scratch, JavaScript, and Unity to over 200 students aged 7-14, and tutored competitive programming in Python. Managed and worked alongside a close-knit team of Senseis to mentor students.



#### Coding Club - Competitive Programming Lead FEBRUARY 2022 - PRESENT SIERRA COLLEGE

Introduce peers to puzzles and teach competitive programming concepts, along with providing tutoring to peers who have questions.

Organized and wrote challenges for the Sierra Competitive Programming Exhibition, our first ever coding contest.



#### **Tutor Center** - Tutor/Academic Support Peer JANUARY 2022 - MAY 2023 SIERRA COLLEGE

Teach and support peers in computer science while working alongside a community of over 70 student tutors spanning over 140 subjects. 0 = 53.5

#### **Accomplishments**

First place, Division 2 PacNW ICPC in California



Competed in Meta Hacker Cup in 2022 + 2023

code jam

Competed in Google Code Jam in 2022 + 2023

Competed in HPE CodeWars in 2021

#### Education

UC Davis College of Engineering - 4.0 GPA SEPTEMBER 2023 - PRESENT

Pursuing B.S. in Computer Science and Engineering



Sierra College - 3.8 GPA

JUNE 2021 - MAY 2023

ROCKLIN, CA

A.S. for transfer in Computer Science and Physics A.S. in Mathematics and Natural Science

#### **Technical Experience**



Java Discord API



Spring



Python

JS JavaScript

Vue.js
AngularJS

Node.js

1 Axios

**Express** 

GC/C++

**G** C#

**Unity** 

arm ARM Assembly

**U**HTML

B Bootstrap

PostgreSQL

Neo4j

# Other Technologies



#### **Postman**

Testing REST APIs, used to debug the Class Search API and test other APIs



Version control and file transfer



Digital audio workstation for composing, used in Cat and Mouse 4



3D modeling and animating software, used in Cat and Mouse 4

#### Coursework

# Computer Architecture

Fall 2023 - Spring 2024

Studied the working of boolean logic at a very low level. Built finite state machines to compute outputs depending on user input. Designed and simulated a Least Recently Used CPU cache using low-level hardware such as gates and switches.

## Algorithm Design and Analysis

Fall 2023

Analyzed the runtime of iterative and recursive functions to find efficient ways to solve problems. Wrote efficient algorithms ranging from greedy interval scheduling to dynamic programming. Applied this theoretical knowledge to competitive programming, to analyze the speed and resource consumption of algorithms.

## Electric Circuits

Spring 2023

Designed and built multiple electric circuits alongside teams of peers, culminating in a final project of building an 8-bit adder and subtractor with analog and digital input. Wrote detailed laboratory reports outlining the entire circuit building process. Earned a perfect score on the final exam after a semester of studying and practicing.

## Data Structures

Spring 2023

Explored the data structures that help programmers write efficient code. Finished studying the entire curriculum over the course of 4 days, freeing up time to spend time on the programming assignments. Implemented data structures, such as Linked List, AVL Tree, and Max Heap, in C++.

# Computer Architecture and Assembly

Fall 2022

Used ARM Assembly to write low-level instructions directly to the CPU. Practiced standards for writing clean and structured code, with clear variables and logic.

## Principles of Physics: Electricity and Magnetism

Spring 2022

Designed and created by hand an electric motor with a split-ring commutator able to run on less than 2 volts. Applied knowledge from the class in the laboratory, and conducted multiple experiments to explore the workings of electricity and magnetism.

# System Programming in C

Spring 2022

Discovered the use case for low-level languages, where speed and efficiency are prioritized. Manipulated system files to restore images from a corrupt storage medium. Learned to manage memory at a low level to prevent overflows.

# Programming Concepts in Java

Fall 2021

Learned principles of clean and readable code, such as documentation comments and simple functions. Assisted the professor as a peer assistant and tutor.

### Self-Study

# CodeForces

Spring 2023 - Present

Participated in global contests alongside UC Davis's Competitive Programming Club. Sharpened my problem-solving skills while practicing with my team for the ICPC.

# Learn Programming Academy

Spring 2020 - Present

Learned and practiced Java as my first object-oriented language, earning a certification one year afterwards. Practiced C++ as a competitive programming language.