# Suhel Keswani

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#### **EDUCATION**

## Georgia Institute of Technology

2021 - 2024

B.S Computer Science, Minor in Music - 3.91 GPA, Dean's List

Atlanta, Georgia

- Threads (Areas of Concentration): Systems & Architecture, Media
- Activities: Jazz Combos 1st chair guitarist & soloist

### **EXPERIENCE**

# Georgia Tech VIP Program - Robotic Musicianship 📝

2022

Undergraduate Researcher

Atlanta, Georgia

- Developed procedural music composition patch in Max/MSP using Markov Chains on MIDI data
- Selected to work under Dr. Gil Weinberg with Georgia Tech's world class robotic Marimba player, Shimon

# Santa Clara University Laptop Orchestra (SCLOrk)

2020

Open-Source Development & Research Intern

Santa Clara, California

• Edited, optimized, documented, & published double bass synthesizer model definition with Dr. Bruno Ruviaro to SCLOrkSynths code repository, an official SuperCollider quark

### **PROJECTS**

Votr 🔼 2021

- Won 3rd place in the NSA Secure Code challenge at Georgia Tech's 2021 HackGT hackathon
- Created a proof-of-concept for a secure & accessible online election
- Built a blockchain data structure in Python to maintain an immutable & anonymous record of verified ballots
- Developed a web-app to interact with the blockchain using React.js, Django REST Framework, HTML, & CSS

#### BandMate 🛂 2020

- Jazz accompaniment system that procedurally generates music
- BandMate gives musicians control of their music, supporting recording and storing audio files in .mp3, .aidd, and .wav formats
- System allows users to tune parameters, including: tempo, key, rhythm, and chord progression
- Parameters are controlled by intuitive GUI, includes volume sliders/buttons, specifically designed for musicians

Chord Crafter 7 2020

- Developed software MIDI Instrument with SuperCollider that outputs data into a Digital Audio Workstation (DAW) for sound synthesis
- Converts standard chord notation to an array of MIDI note numbers
- Intuitive GUI allows musicians to notate of extended chords up to the thirteenth scale degree with inversions

#### $\mathbf{Auctions}$ 2020

- Created proof of concept e-commerce website with Django, BootStrap, Python, HTML, & CSS
- Features include: user registration, bidding on other users' listings, leaving comments on listings, adding listings to watchlists, & creating listings

#### RELEVANT COURSEWORK

Computer Graphics; Computer Systems & Networks; Probability & Statistics; Computer Organization & Programming; Applied Combinatorics; Objects & Design; Data Structure & Algorithms; Discrete Mathematics; Linear Algebra; Object-Oriented Programming; Calculus 1, 2 & 3

## SKILLS & TECHNOLOGIES

Java, Python, C/C++, JavaScript, React. is, Django, Firebase, HTML/CSS, Figma, Git, ARM Assembly, Sound & Music Computing