Stephen Karukas

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Education

Indiana University, Bloomington, IN	May 2022
Master of Science in Computer Science	Cumulative GPA: 4.00/4.00
Indiana University	December 2019
Bachelor of Music in Composition & Bachelor of Music in Percussion	Cumulative GPA: 3.99/4.00
• Minors in Computer Music & Computer Science	CS GPA: 4.00/4.00

• Graduated with High Distinction

Relevant Employment

Indiana University, Bloomington, IN January 2020 – May 2020
Undergraduate Instructor
• Co-instructed a lab section of 15 students with no prior programming experience for CSCI-C 211 Introduction to Computer Science (taught using the language Racket).
• Held weekly office hours, review sessions, and extra individual meetings with struggling students, which took place through Zoom for the second half of the semester.

Software Development Projects (github/skarukas)

xen/springs/tune December 2019 – Present
Web apps and programming tools for microtonal music theory
• Developed a web app (springs) for editing notes in a novel, interactive way, with MIDI editing capabilities and domain-specific processing functions.
• Wrote a custom scripting language (xen) including domain-specific types/operators and playback of musical objects, interpreted in the browser.
• Wrote an object-oriented TypeScript/JavaScript library (tune.js) for working within musical pitch systems.
• Tools used*: CSS, Rollup, jQuery, WebAudio, HTML Canvas, File API, SVG.js, JZZ.js, browserify*

JShorthand Summer 2019
JavaScript library
• Developed a syntactic sugar JS library for performing a set of actions on an object in just one statement.

Skills

Technologies: Python, Keras, JavaScript, TypeScript, Java, MATLAB, jQuery, familiar with SQL and Unix/zsh
Courses: Machine Learning, Computer Vision, Machine Learning for Signal Processing, Elements of Artificial Intelligence, Audio Processing, Data Analysis & Mining, Applied Algorithms, Data Structures & Algorithms, Object-Oriented Design Patterns, iOS Development*, Machine Learning**, Neural Networks and Deep Learning** **CodePath MOOC, **Coursera MOOC*
Creative Software: Adobe Suite (Acrobat/Illustrator/Photoshop/Audition), Logic Pro X, Final Cut Pro
Personal Traits: Self-motivated and independent, with a strong attention to efficiency and detail
Other Interests/Strengths: Digital audio and signal processing, computer graphics, object-oriented programming, functional programming, machine learning models

Academic Awards / Honors

Hutton Family Study Abroad Scholar	Summer 2018
Indiana University Founder's Scholar	2016, 2017, 2018, 2019
Jacobs School of Music Academic Excellence Award	2015