Gabriel Klavans

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Computer Scientist

Website: dabe.tech
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Interested in signal processing, developing software for audio/music, and generally making people's lives better. Passion for music, video games, and free, open source technology for all.

SKILLS

Languages	JavaScript/TypeScript, Python, C++/C, Java, Rust (learning), C#, LaTeX
Tools and Environments	Git, NodeJS, AngularJS/ReactJS, Git, VSCode, MongoDB, Jenkins, Mocha/Chai

PROFESSIONAL EXPERIENCE

SOFTWARE ENGINEER (C++/Android/Python/Matlab) Sept 2022 — Present
Yobe Inc. Boston, MA

- Implement audio signal processing algorithms in C++ that were developed in Matlab
- Tweak signal processing algorithms for efficiency and code-completeness in Matlab
- Write testing in GTest and support scripts in Python
- Participate in design and business discussions in a fast-paced startup environment
- Help develop an Android app to package Yobe's core library

ASSOCIATE SOFTWARE ENGINEER (C/C++/C#) Sept 2021 — Sept 2022
Canon USA, Healthcare Optics Research Lab Cambridge, MA

- Completed component for uploading firmware to STM32 ARM chips within our proprietary application
- Prototyped and collaborated on a Jenkins automated build-server for use in multiple projects
- Created documentation for software component specification and verification for use in our quality management system
- Created a test suite for a proprietary serial communications library using GoogleTest
- Performed iterations of bug-detection/fixing on a complex architecture written by multiple engineers over the span of years

FULL STACK JAVASCRIPT ENGINEER (JavaScript/Typescript) (Intern) Aug 2020 — Apr 2021 / (Full-time) Apr 2021 — Sept 2021
Tapple Boston, MA

- Contributed to every level of the stack: AngularJS, SailsJS (NodeJS wrapper), MongoDB
- Spearheaded feature involving PhaserJS-based customizable browser games
- Worked closely with technical lead to discuss architecture and design goals for the product
- Took charge of style/static analysis tools for code-base

PROJECTS

CORPORATE CLASH GAME DEVELOPER (Python/C++) December 2022 — Present
Toontown-inspired non-profit free-to-play MMORPG *corporateclash.net*

- Improved the build-process and dev-environment through various means, such as augmenting developer workflow and fixing issues with the back-end build process and source code regressions
- Fixed bugs and implemented features using Panda3D, a Python-based game engine, and Astron, an MMORPG-focused server architecture

PITCH DETECTION DIRECTED STUDY (Academic) *gabeklavans/computational-audio*
Directed study with Prof. Wayne Snyder (Boston University) in fundamental frequency (F_0) detection

- Studied and implemented several F_0 detection methods, such as autocorrelation, YIN, and cepstral

NUMPADULATOR (Personal) *gabeklavans/Numpadulator*
Designed-from-scratch mechanical numpad

- Designed case/plate fixtures in Fusion360
- Designed and assembled PCB from scratch using KiCad
- Runs on a slightly modified version of QMK, a C-based open-source keyboard firmware

EDUCATION

Master of Science in Computer Science, *Boston University*	**Sept 2020 — May 2021**, 3.83 GPA
Bachelor of Arts in Computer Science, *Boston University*	**Sept 2017 — May 2021**, 3.83 GPA
Minor in Music (Theory), *Boston University*	

ACTIVITIES

BU Bands Member, *Boston University*	**2017 — 2021**
Xylo & Drumset Player *Spartans Drum & Bugle Corps*	**2018, 2019 (Gold Medalists)**
Discrete Mathematics Course Assistant *Boston University*	**Spring, 2020**