Kenneth (Page) Swanson

Lives in New Haven, CT **E-mail** kpswanson@gatech.edu **GitHub** pageswanson **Website** pageswanson.github.io/homepage

Education

Georgia Institute of Technology

05 / 2017 **B.S. Computer Engineering**, GPA : 3.5 / 4.0

Interests

Sound synthesis, Mixing and recording techniques, Obsolete drum machines, Web technologies, Teaching and demonstration, Electronic literature, Exciting and difficult music, Recorded performance

---

Experience

Full-stack Software Engineer / Abrigo - Remote

09 / 2017 → Present **Develops applications for large data transfer** alongside a team of 9 full-stack engineers and product managers to enable a rapid import pipeline (Agile w/ Jira, C#, .NETStandard) **Provides hourly support** for client-facing project managers, responding to service requirements for over a thousand financial institutions across the US **Part of a frontend initiative** to introduce code sharing opportunities across teams, build process improvements and a contemporary frontend workflow (Vue.js) **Scaled a document import service** to onboard client image repositories with existing financials. Incorporated respository layer for import transactions, unit tests, task logging with line-item feedback. Added an avenue for internal document distribution to customer portals for fast advisory feedback (NHibernate, LINQ, SQL, Moq) **Engineered a guided walkthrough** by learning component architectures for a modular onboarding interface. Included widgets for parsing initial extracts to generate mappings, check data integrity, and poll services to suggest new configuration. Enabled a subscription pathway with greater agency for the financial institution and inspired two new product workflows (AngularJS, components)

Software Developer in Residence / NHFPL - New Haven, Ct

05 / 2020 → Present **Serves as a community reference** for software development resources and learning tools. Leads sessions on a bi-weekly basis with introductions to core web technologies as an entry point to learning code. Offers weekly individual help sessions as office hours for aid in coding of all kinds (JavaScript, HTML, CSS) **Leads an app-building series** teaching newcomers about the development landscape and web technologies targetting mobile devices (NativeScript)

Programming Systems Teaching Assistant / Georgia Institute of Technology - Atlanta, Ga

09 / 2016 → 05 / 2017 **Assisted Sophomore programmers** with algorithm development, data structures, and general concepts in theory and design (C, MIPS Assembly)

Product & Test Engineering Intern / Texas Instruments - Dallas, Tx

05 / 2016 → 08 / 2016 **Designed an internal web portal** to process and archive data from a test device document. Used a custom text parser to support decision trees and report creation for a team of 5 engineers (Python) **Experimented with request mocking** and included frontend form sanitization and server-side document content checking where all inputs had an expectation mapping (promises, Requests, regex) **Built responsive data visualizations** to identify trends in test device design (Plottable.js)

Projects

TOVA - A Responsive Musical Synthesizer

12 / 2016 → 05 / 2017 **Prototyped a holistic music synthesis device** which responded to arbitrary input audio and note sequences with a voice selection and melodic phrase **Contributed an audio feature extraction module** based around the chromagram for input audio analysis (raspPi, Python, librosa) **Trained a pitched tone classifier** using calculated points from over 4000 audio files to pair an accompanying voice from an analog synthesis module (TensorFlow)

Sub 1 Kbps Speech Coder

03 / 2017 → 04 / 2017 **Implemented a 996 bps speech coder** while maintaining intelligible speech and speaker fingerprint. Constructed architecture with elements of LPC, codebook vector quantization and pulse excitation in MELP (MATLAB)

Guthman-Moog Musical Instrument Competition

2015, 2016, 2017 **3-time participant and finalist** in 2015 with an IR emitter PVC slide instrument and in 2016 with a light-based breath transducer to create a wind controller for the Moog Werkstatt synthesizer kit