Conrad Henry Appel, IV

(504) 275-0135 | me@conradhappeliv.com | conradhappeliv.com
3832 Edenborn Ave. | Metairie, LA 70002

Education

Southern Methodist University - B.S. Computer Engineering - 3.761 GPA — Aug 2013-May 2017

Engaged Learning: Design and Implementation of Digital Music Synthesizers

Relevant Courses: Digital System Design, Microcontroller Architecture & Implementation, Ubiquitous Computing, Machine Learning in Python, Circuits I, Digital Signal Processing, Digital Image Processing, High Performance Scientific Computing, Data Structures

Awards: Departmental Award in Computer Engineering — April 2017

Scholarships: Second Century, Lyle Engineering Fellows, and National Merit Finalist Scholarships

Experience

Engineer (API Team), Lucid (New Orleans, LA) — June 2017-Present

- Designed and implemented a textual search microservice utilizing ElasticSearch that maintains indexes for many entities, which reduced query times from tens of seconds to generally less than 200ms.
- Collaborated with the Product Team to design version 2 of the company's API which more closely follows REST principles, provides more flexibility to the integrator, and greatly speeds up commonly-used endpoints.
- Implemented an audit logging microservice via Lambda/API Gateway, SQS, SNS, and RDS that aggregates update events from multiple sources for consumption by human users

Software Development Intern, Lucid (New Orleans, LA) — Summer 2014

- In a Python/MongoDB automated sample exchange buy/sell application, reduced monthly costs by thousands and increased revenue by working with stakeholders to improve business logic — Summer 2015
- Created a centralized logging system and real-time stats dashboard using Logstash and ElasticSearch that provides key insights into the performance of the application
- Designed client libraries and examples in Node.JS, PHP, and Python for the Lucid APIs
- On a business-essential front-end application, designed an automated unit testing system using Jasmine and JenkinsCI

Teaching Assistant, Data Structures/C++ at Southern Methodist University (Dallas, TX) — 2015-2016

- Augmented learning of around 20 students with additional topics in a weekly lab sections
- Assists/mentors students with projects individually or during a Help Desk assignment

Skills

Spoken Languages: English (native), Russian (basic/A2)

Programing Languages: Python, Go, JavaScript/node.js, HTML + CSS, C++/C, Assembly, HDL (Verilog)

Libraries: Numpy, Flask, Tornado, VueJS, Web Audio/MIDI/Gamepad APIs, Android

Software: Git, ElasticSearch, Kong, Kafka, Grafana + Graphite

Databases: SQL Server, PostgreSQL, GCP Datastore, MongoDB

Platforms: Amazon Web Services, Google Cloud Platform

Other: Rapid Prototyping

Projects

Engaged Learning – The Design and Implementation of Digital Music Synthesizers — April 2016 – April 2017

Received a $2000 grant to pursue this interdisciplinary topic, covering music, electrical engineering, and computer science topics. Designing software music synthesizers using DSP techniques.

Play My Piano — August 9, 2015

Personal project that allowed people play the piano in my home from anywhere. Each performer was free to play for 5 minutes via their MIDI keyboard. Python server & JavaScript client.

Activities

Theta Tau Professional Engineering Fraternity — Inducted Spring 2015

SMU Engineers Without Borders – Project Lead/Development Liaison — 2013-2016

Tau Beta Pi Engineering Honor Society — Inducted Spring 2015

Previous hackathon participant (Awards received at MHacks IV, MakeSMU, and SXSW Music Hackathon Championship)

Instrumental music, vocal music, musical theater

TREAT (hosts open mic nights for the SMU community) - Treasurer and Performer — Spring 2014-present