Vignesh Chandrasekhar

Software Engineer

https://vigneshchandrasekhar.com

EDUCATION

Bachelor of Science in Computer Science, *Minor in Business* — **Boulder, CO**
University of Colorado Boulder — **Aug 2019-May 2023**
GPA: 4.0 Major | 3.983 Cumulative
Honors: ***Summa Cum Laude***
Awards*: Professional Learning Award, Active Learning Award*

EXPERIENCE

Associate Software Engineer; *Charles Schwab – WAM ENG DATA TECHNOLOGY* — **Sept 2023 – Present**

- Fund of Funds Hashing Framework
  - Migrating hashing framework database warehouse from BigQuery to Snowflake via Python Scripts
    - Achieved >70% coverage in unit tests
  - Elevating hashing framework to QA, UAT environments on-prem and cloud
  - Configuring CI/CD pipelines in Bamboo for code deployment and Control - M jobs for integration and scheduling

Software Engineer Intern; *Charles Schwab – Wealth & Asset Management Engineering* — **June 2022 – Aug 2022**

- Developed a full stack governance application using Angular 9, C# .NET Core 3, and SQLServer that allows WAME local governance coordinators and board members to view, maintain, schedule reviews, and vote on architecture requests submitted by engineering and developer teams through Jira. Utilizes the Jira REST API to retrieve ticket information and allows coordinators to submit subtasks and comments to an issue.
- Utilizes a 3rd Normal Form Data Model to manage personal information of a developer or coordinator, review schedule, selected voters/reviewers, voting results, and stipulations. Incorporates associative tables to reduce redundancy via foreign key relationships.
- Sends emails to architects and coordinators in different contexts with SMTP.
- Utilizes route guards via SSO authentication for different WAME security groups.

Course Assistant; University of Colorado Boulder College of Engineering

- Artificial Intelligence (CSCI 3202) — **Jan 2023 – May 2023**
  - Supporting students in learning AI concepts with Python such as path finding, Bayesian Networks, reinforcement learning, Hidden Markov Models, and game theory
- Software Development (CSCI 3308) — **Aug 2021 – Dec 2021**
  - Assisted students in building web applications using HTML, CSS, JavaScript, bootstrap, NodeJS, Express JS, Docker, PostgreSQL, REST APIs, and Heroku.

NSF-REU; National Science Foundation; Utah State University — **May 2021 – July 2021**

- Conducted research in engineering education and its applications to topics in fluid dynamics for an ONR funded project: "Mobile Instructional Particle Image Velocimetry (mI-PIV). Developed a Teach Engineering activity for a vortex generator experiment.

Professional Certifications

Associate Cloud Engineer - *Google Cloud*
Issued Dec 2023

Projects

Optimized Health	**F**ull stack smart health web application built with NodeJS, PostgreSQL, and the Spoonacular nutrition API.
DNS Resolver	Designed and programmed a multi-threaded DNS resolver in C using synchronization methods. Scored highest multi-threaded speedup of all submissions. Part of the Operating Systems course at CU Boulder.
HTTP Web Proxy	Designed and programmed a multi-processed HTTP Web Server in C that handles simultaneous client connections, as well as keep-alive socket functionality. Servers web pages from remote hosts or from local cache within specified timeout range.
Distributed File Server	Designed and programmed a multi-threaded distributed file server that receives client requests to GET, PUT, and LIST a number of files distributed by chunks across multiple servers, and will construct the whole file as requested.

Technical Skills

Languages + Frameworks: C, C++, Python, SQL, JavaScript, Angular, ReactJs, NodeJS, .NET Core 3
Platforms + Services: MongoDB, Heroku, GitHub, GCP, Snowflake, Docker, Bamboo, Control - M
Course Knowledge: Algorithms, Data Structures, Software Development, Network Systems, Linux Systems Administration, Operating Systems, Database Systems, Data Science, Artificial Intelligence,, Theory of Computation, Discrete Structures, Machine Learning