Daniel Nguyen

Software Engineer | Seattle, WA | (206) 565-9951 | danielnn@uw.edu

LinkedIn: https://linkedin.com/in/chrysippean **Github:** https://github.com/chrysippean **Portfolio:** https://chrysippean.com

Technical Skills

Programming: C++, Python, Java, Go, Rust, Assembly, Shell Scripting, Javascript, Ruby, Lua, MATLAB, Scala, Common LISP
Databases: SQL, Redis, AWS, Azure, MongoDB, Spark, Hadoop, Apache, Kafka, REST, CI/CD, Microservices, NGINX
Other Technologies: Linux, Git, Docker, Kubernetes, Terraform, Tensorflow, NLP, React / Redux, Node.js, GraphQL

Projects

3D Aircraft Renderer

- Programmed in the C programming language and the SDL development library to write a 3D graphical renderer of aircraft models entirely from scratch, implementing multiple meshes and textures along with camera control.
- Implemented matrix transformations/projections and vector operations to rasterize graphical components, perform texture mapping, and display lighting and shading.

Atari 2600: Bomber Game

- Programmed a vertical scrolling shooter game for the Atari 2600 inspired by *River Raid* in Assembly for the 6502 processor.
- Designed graphics display, audio and gameplay for the 6502 processor and the TIA chip, optimizing low-level memory manipulation, designing player bitmaps, and debugging using an emulator (Stella).

Music Classifier

- Created a MATLAB program that uses ML algorithms (Naïve Bayes, Linear Discriminant Analysis, K-Nearest Neighbors) to categorize songs according to 10 different genres (classical, jazz, hip-hop, etc.) achieving an accuracy of 68%.
- Tracks were decomposed into spectrograms in order to reformat the data in terms of sound frequency, and applied the SVD (Singular Value Decomposition) algorithm to obtain the defining modes of each genre.

Crypto Profit-Calculation Scripts

- Wrote Python scripts that utilizes the Coinbase API to calculate earnings in leverage trading with cryptocurrency based on user strategy & real-time prices.
- Users can input information such as their principal/capital, leverage amount (1-100x), choose the market price to start from and targeted growth, and receive a detailed report of trades to place, net earnings, and compare their results to HODL'ing.

Experience

DevOps Engineer 02/2021 - Present

Resolution Bioscience

- Developing scripts and software tools to address custom user requests and streamline daily operations and support.
- Working with DevOps and software engineers to automate cloud infrastructure and software deployments.
- Implementing and executing process audits such as audits of automated backups, monitoring systems, etc.
- Diagnosing and resolving user tickets related to the analysis pipelines and laboratory information management system.
- Improving software management and deployment standards including issue tracking, staging, and documentation.

Mathematics / Computer Science Tutor 10/2019 - 03/2020

University of Washington

- Taught math subjects ranging among calculus, statistics, linear algebra, and business mathematics.
- Assisted students with homework assignments through guided problem-solving and advised on midterm/final preparation.
- Helped CS students debug and build projects such as writing back-end servers and structuring database APIs in Java.
- Worked with other tutors and instructors to explain and clarify challenging concepts in pedagogically constructive ways.

Education

Mathematics, BA 09/2016 - 06/2020

University of Washington

Courses: Database Management Systems, Data Analysis & Machine Learning, Algorithms and Computational Complexity, Number Theory & Cryptography, Data Structures & Algorithms, Artificial Intelligence, Scientific Computing & HPC, Programming Languages, Discrete & Continuous Mathematical Modeling, Abstract Algebra (Ring, Group & Field Theory), Topology, Real + Complex Analysis

Languages

Vietnamese (Native), **French** (Highly Proficient), **Latin** (Proficient), **Sanskrit** (Proficient), **Chinese** (Intermediate), **Hindi** (Beginner)