Anthony Nguyen

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EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES **Los Angeles, California**

Computer Science Major, Expected Graduation, Jun 2020

- GPA: 3.77
- Regents Scholar, Upsilon Pi Epsilon Honor Society (Computer Science), Alpha Lambda Delta Honor Society (Service)
- Relevant Coursework: Algorithms and Data Structures, Algorithm Design, Operating Systems, Network Fundamentals, Networks – Physical Layer, Compiler Design, Data Mining, Programming Languages, Software Design, Parallel and Distributed Computing, Computer Security, Computer Graphics

WORK EXPERIENCE

Moog Aircraft Group **Torrance, California**

Engineering Intern *Jun 2017 – Sep 2017*

- Designed and wrote software to test hardware functionality of Actuation Control Units for military drone projects using Python with modules such as NumPy along with integrating use of Excel
- Improved the run-time efficiency of the data analysis scripts by rewriting them in C, taking advantage of GPU parallelism with OpenCL, and utilizing vectorized SIMD instructions.
- Improved the run-time efficiency of existing test scripts by lowering the time complexity of existing algorithms from $O(n^3)$ to $O(n^2)$, and rearranging data access to take advantage of cache locality

Moog Aircraft Group **Torrance, California**

Engineering Intern *Jun 2019 – Present*

- Designed Software Test Tools combining C++ and Python to simulate a Flight Control Computer interface
- Implement and shipped the front and backend of an inventory database web service using JavaScript, PHP, and SQL currently used to track location and status of test equipment

PROJECTS

Convolutional Neural Network Parallelization

C/C++ *Jan 2019*

- Utilize AWS EC2 g3s.xlarge instance and OpenCL to parallelize the CNN matrix computation, improving performance from 10 Gigaflops to 800 Gigaflops

Project BUGS!

Coding Competition (C/C++) *Jan 2017 – Feb 2017*

- Designed and implemented using C++, a programming competition that utilizes multiple levels of inheritance and polymorphism along with efficient data structures such as maps and vectors
- BUGS! is a competition platform that allows users to enter their own "Bug-Files" (written in a simple interpretable language) to compete and see who's logic best leads their "bug" colony to success

Naval Battle

Mobile App (Java) *Dec 2017 – Feb 2018*

- Constructed the back-end of a wireless turn-based multiplayer game using Java and Android's Wi-Fi Peer-to-Peer API

Amazon EKS

AWS Cloud Service *Mar 2019 – Apr 2019*

- Familiarization with Amazon EKS (ECS for Kubernetes) to deploy a Kubernetes control plane
- AWS CloudFormation to launch cluster of worker nodes and deploy a containerized application

KenKen Solver

Prolog Application *Jun 2018*

- Built an application using Prolog that takes a KenKen puzzle (sudoku-like puzzle) as input, and outputs all possible solutions for that puzzle
- Takes advantage of Logical Programming paradigms to simplify the implementation of an algorithm that would be overly complex in an iterative or object-oriented language

ADDITIONAL SKILLS

- C++, C, Python, Java, JavaScript, PHP, SQL, MPI, OpenMP, OpenCL, Jenkins, AWS, Bash, Android