Mohamed **Yoosuf Shafi**

shafitek@gmail.com | (916) 670-5584 | Elk Grove, CA
shafitek.com | shafitek | shafitek

Education

University of California, Davis — *Davis, CA*
BS in Computer Science and Engineering — *Sep 2018 – Aug 2020*

Cosumnes River College — *Sacramento, CA*
AS in Mathematics, Physics, Computer Science, and Engineering — *Jan 2013 – May 2018*

Relevant Coursework

Software Engineering, Algorithms and Design, Artificial Intelligence, Machine Learning, Computer Vision, Embedded Systems, Computer Architecture, Computer Networks, Combinatorics, Probability and Statistics, Applied Linear Algebra, Calculus

Projects

Eliminating Pointless Packaging

Senior Design Project. I was the technical lead of the group. *GitHub Link*

- Communicated with the client effectively and translated his vision into a functioning product.
- Architectured a scalable web application infrastructure.
- Trained and deployed a Mask R-CNN model to Google Cloud Platform and leveraged several of Google's services such as Cloud SQL, Cloud Storage, Compute Engine, and the Kubernetes engine.
- Implemented majority of the back end using the Django and Django REST Framework; front end using HTML, CSS, jQuery; and with features involving custom authentication system, infinite pagination, and AJAX file uploads.

Parallelized Seam Carving on GPU

Computer Vision Personal Project. CUDA and OpenCV. *GitHub Link*

- Implemented parallel version for parts of the Seam Carving algorithm. Exploited data and task level parallelism to compute energy images and maps.
- Utilized the OpenCV library for the CPU version of the algorithm and used CMake to manage the build process of the application.

DeepChess-AI

Machine Learning project. Python, NumPy and Keras. *GitHub Link*

- Implemented a neural network based score function for the minimax algorithm with alpha-beta pruning based on an academic paper DeepChess.
- Generated 3+ million data points from a large dataset using parallel processing which reduced the time from hours to mere minutes.

Work Experience

Cosumnes River College — *Sacramento, CA*
Tutor (in Computer Science, Physics and Mathematics) — *Jan 2018 – May 2018*

Technical Skills

Programming (Familiar): C, C++, Python, HTML, CSS, Javascript, MATLAB, R, Java, CUDA, Lisp, Go, SQL, LaTeX
Libraries: OpenCV, Keras, Scikit-learn, jQuery
Frameworks: Django, CSS Bootstrap
Tools: Linux, Git, Docker, CMake, Google Cloud Platform, Wireshark, VSCode
Industry: Algorithm Analysis, Software Design Patterns, Statistical Analysis, Probability Simulation, Optimization

Last updated: September 27, 2020