Luan Dang

luandang2023@gmail.com - Palo Alto, CA - LinkedIn - 510-517-4973

EDUCATION

Stanford University, Stanford, CA — *June 2027*
Bachelor of Science in Computer Science — **GPA: 3.6/4.0**
Relevant Coursework**:** Programming Methodology, Programming Abstractions, Computer Organization and Systems, Mathematical Foundations of Computing, Introduction to Probability for Computer Scientists, Linear Algebra, Multivariable Calculus

Laney College, Oakland, CA — *August 2019 - June 2023*
Associate's Degree in Mathematics — **GPA*:* 3.70/4.0**

TECHNICAL SKILLS

Python, PyTorch, C++, C, Javascript, HTML, CSS, Git, Linux/Command Line, Valgrind, Microsoft Excel

HIGHLIGHTED PROJECT & WORK EXPERIENCE

Improvement, Analytics, and Innovation Services
Process Optimization Tool Front End Engineer React | Python | API

- Build a dashboard where process improvement consultants can analyze and interact with process maps to identify bottlenecks and areas of improvement
- Designed the user interface taking into account efficiency and user-friendliness and created it with React
- Implemented a chat-bot interface with React and Python with which consultants can interact with their process map analysis

Computer Organization and Systems — Stanford University, CA
Custom Heap Allocator: Implicit and Explicit Free List Implementations | C, Terminal, Valgrind | *November 2024*

- Created custom heap memory allocators (`mymalloc`, `myrealloc`, `myfree`) in C, utilizing linked lists and dynamic memory allocation to manage memory efficiently
- Included an explicit free list allocator with a doubly linked list for O(1) block coalescing and recycling, optimizing memory utilization and performance
- Built comprehensive testing tools, including a custom heap validation function and debugging aids, ensuring correctness and identifying fragmentation and coalescing inefficiencies

Programming Abstractions — Stanford University, CA
Huffman Coding File Compression and Decompression System | C++, Recursive algorithms, Binary trees | *March, 2024*

- Developed a program for file compression and decompression that implements Huffman coding, utilizing priority queues for node management and binary trees for encoding
- Built encoding and decoding algorithms for tree structures, ensuring seamless bidirectional data transformation
- Optimized binary tree construction for Huffman coding, ensuring efficient memory usage and fast processing for large datasets

The Chadhauri Lab — Stanford University, CA
Research and Machine Learning Intern | PyTorch, Git, Linux | *July 2024 - August 2024*

- Implemented the RSoft AI model to analyze mechanical properties of cells, leading to enhanced understanding of cell behavior and graphical data for future research projects
- Customized Python scripts for the RSoft project, optimizing the evaluation of softness fields in 3D cell structures, resulting in more precise modeling of tissue regeneration

Stanford University — Palo Alto, CA
CS Tutor — *June 2024 - July 2024*

- Tutored approx. 4 underclassmen on a weekly basis on Python fundamentals such as dictionaries, while loop splicing, and logical reasoning in code building
- Developed tutoring techniques taking into account students' learning needs, skills, and abilities

Leadership and Affiliations

Thrive Scholars — Los Angeles, CA
Scholar — *June 2021 - Present*

- Selected as one of 240 students for a 6-year college access, college success and professional development program for high achieving, underrepresented first generation talent
- Participate in a four-year comprehensive Career Development Program that includes professional Career Coaching, case studies and projects to hone analytical, quantitative, and communication skills