Matthew Duong

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EDUCATION

California State University Northridge — Northridge, CA
Bachelor of Arts in Computer Science — *Aug. 2019 – December 2023*

CSUN Dean's List: College of Engineering and Computer Science — December 2019 – December 2023
- Remained on the Dean's List for the entirety of my undergraduate studies
- Maintained a cumulative 4.0 GPA from my freshman year to the end of my senior year

CSUN Spring 2023 Senior Design Showcase - Oral Presentation Winner — May 2023
- Competed against 12 teams/projects within the Computer Science department

EXPERIENCE

Software Developer Intern: Division 32 (Planetary Science) — August 2022 – Present
NASA Jet Propulsion Laboratory — *La Canada Flintridge, CA*
- Worked as a software developer intern specializing in interfacing and automating data acquisition instruments from National Instruments, Anaheim Automation, and Ivium Technologies using *Python*
- Assisted in building a new data collecting test bench using a load cell, torque sensor, and dielectric spectrometer
- New software and test bench replaced the previous Linux based system provided by *Honeybee Robotics*
  * Streamlined data processing by eliminating lengthy manual formatting and data-type conversions
    · Replaced the need to manually transfer and convert Linux HDF5 files to CSVs using a separate Windows machine, which could take up to 3-5 minutes per file previously
  * Integration of all bench components into a single unified software platform optimized data acquisition efficiency
    · Enabled simultaneous live monitoring of every bench component, while maintaining ease of navigation and user-friendliness
- Deployed an fully automated variant of the data acquisition software within a zero-gravity *Blue Origin* flight payload to continuously monitor and log data for 6 consecutive hours
- Conducted test bench field experiments using Lunar and Martian soil samples
- Collaborated on a paper with mentors Dr. Robert Anderson and Dr. Keith Chin by providing data plots and experiment notes gathered from the test bench *(i.e. soil strain, shear strength, water/ice content)*
- Acquired beginner-level skills in electronics from building and wiring test bench components

Office Student Assistant: Department of Faculty Affairs — Aug 2019 – May 2023
California State University Northridge — *Northridge, CA*
- Worked as a receptionist to re-direct calls and/or answer faculty related questions
- Managed and processed electronic faculty forms through document management systems *(Interfolio, Onbase)*
- Assisted in organizing faculty events by creating event calendars and procedural flow charts

PROJECTS

SwiftCheck - Online Medical Checkup - Senior Design | *Jira, HTML, CSS* — Aug 2022 – May 2023
- With five senior Computer Science students, built a website for users to interact with a 3D human model, answer medical probing questions, and get a possible diagnosis
- Took the role of project manager to oversee teammates' duties, task organization, meeting schedules, and oral presentations
- Project demo and oral presentation won the CSUN Senior Design Showcase Oral Presentation in Spring 2023

Multimedia System Design - Marks Automation Script | *Python, MongoDB* — Jan 2023 – May 2023
- Built an automation script using Python, that automates 4 manual media related positions
- Python code reads proprietary data from Baselight and Flame machines to calculate file system locations of frames in a project's media/video file
- All requests saved to MongoDB database and can used for data analysis and improve worker efficiency
- Exports as CSV/XLS files with video's time-code and thumbnail preview that can uploaded to Frame.IO/Shotgrid

TECHNICAL SKILLS

Languages: Python, Java, HTML, CSS
Developer Tools: Github, Jira, Visual Studio Code, Google Colaboratory
Libraries: argparse, Matplotlib, NI-DAQmx, pandas, pyvium, Tkinter