

Son Tran

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EDUCATION

University of California, Berkeley

Aug 2018 – Dec 2020

B.S. in Electrical Engineering & Computer Science; GPA: 3.93/4.00

- CS Coursework: Data Structures, Algorithms, Machine Structures, Artificial Intelligence
- EE Coursework: Convex Optimization, Designing Information Systems, Signals and Systems, Robotics

WORK AND RESEARCH EXPERIENCE

UC Berkeley, EECS Department — Teaching Assistant

Jan 2020 – Present

Git, Numpy, Scipy, L^AT_EX, Python

Berkeley, CA

- Assisting professors and collaborating with more than one hundred TAs in maintaining high-quality instruction
- Supporting more than two thousand undergraduates with course materials understanding
- Leading two discussion sessions per week to assist students in reinforcing materials
- Mentoring the students in their achievement of academic success and social engagement

UC Berkeley, EECS Department — Undergraduate Research Assistant

May 2019 – Dec 2019

Python, Open3D, OpenCV, Robots

Berkeley, CA

- Used LIDAR, depth and RGB cameras to collect over 100 GB of 3D graphical data for developing computer vision algorithms
- Wrote code using Python 3 and Open3D library to process point clouds and image data
- Assisted graduate students in designing hundreds of micro jumping and swimming robots
- Tested the robots to guarantee the designs meet the requirements of performance and safety

California State University, Fullerton — Undergraduate Research Scholar

Jun 2018 – Aug 2018

Scala, Apache Spark

Fullerton, CA

- Used Apache Spark and Scala to implement and test machine learning algorithms
- Attended collaborative meetings to address issues in implementing the algorithms

NASA JPL (Jet Propulsion Laboratory) — Software Engineering Intern

Feb 2018 – May 2018

Java 8, Kafka Streams, Git, Python

Pasadena, CA

- Used Kafka Streams framework and Java 8 to implement a streaming application processing real-time data
- Participated in collaborative meetings with experts and team members to design the application
- Applied feedback from users to improve efficiency and user experience of the application

RiverCrane Vietnam Inc. — Software Developer

Aug 2014 – Aug 2015

Java, JavaScript, Linux, Git, bash, SQL, PHP, HTML, Vagrant, Docker

Ho Chi Minh, Vietnam

- Developed a webpage for shop owners to manage items, using Java 7 and SQL databases
- Troubleshoot and resolved bugs in a shopping website with thousands of daily customer visits
- Maintained a Linux server and SQL databases by inspecting configurations and system logs
- Wrote Java unit and integration tests to improve quality of applications

PROJECTS

Visual Navigation in Dynamic Environments for Mobile Robots

Jan 2020 – Present

Git, Linux, ROS, Python, Open3D, OpenCV, TensorFlow, Pytorch

Berkeley, CA

- Collaborating with four team members on designing an algorithm and machine learning pipeline for indoor visual navigation
- Implementing the algorithm and architecture, using Python 3, Pytorch, TensorFlow and OpenCV

The Maze Runner

Aug 2019 – Dec 2019

Git, Linux, ROS, Python, OpenCV

Berkeley, CA

- Programmed a robot using video feedback from an external camera to traverse a maze
- Implemented algorithms on the robot, using Python 2 and ROS (Robot Operating System)

Personal Website — <https://samtron1412.github.io>

Aug 2019

Git, GitHub, JavaScript, Python, Node.js, HTML, CSS, Linux

Berkeley, CA

- Built my personal website using Node.js

Deep Space

Jan 2019 – May 2019

Python, GIMP

Berkeley, CA

- Designed and implemented a 2D tile-based world exploration game
- Used graphical and text-based tiles to generate a world that users can explore by walking around and interacting with objects in that world
- Developed an algorithm that randomly generates connected rooms in a maze for each level of the game

RELEVANT TECHNICAL SKILLS

Programming Languages: Python, Java, C++/C, bash (shell scripting), JavaScript, HTML, CSS

Technologies: Git, Docker, Vagrant, Numpy, Scipy, Pytorch, TensorFlow, UNIX (Linux, macOS), OpenCV, Open3D