Jasem Ali

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Sunnyvale, CA, 94089

EDUCATION

BACHELOR OF ELECTRICAL ENGINEERING – ***June 2020 - December 2023***
University of The Pacific, Stockton CA

- GPA 3.85
- Dean's Honors (2020- Present)
- Member of Tau Beta Pi Engineering Honor Society
- Member of Mortar Board Honor Society

RELATED COURSES

- Microcontrollers
- VLSI Design
- Auto. Control Systems
- Advanced Circuits
- Computer Systems & Networks
- Digital Design
- Machine Learning
- Mobile Robotics

EXPERIENCE

ENGINEERING TUTOR – ***October 2023 – Present***
University of The Pacific - Stockton, California, United States

- Conducted classes centered on the **Tiva™ C Series TM4C1294 microcontroller, SPI communication protocols, and ARM assembly**, emphasizing both theoretical understanding and practical application.
- Collaboratively worked with the lead professor in **evaluating student assignments** and projects, coupled with **diagnosing and rectifying** any project-related errors encountered by students.
- Managed and directed high-volume **office hours**. Successfully conducted office hours, simultaneously addressing the queries and technical challenges of **over eight students**, focusing on code-related issues and general inquiries .
- **Authored detailed lecture notes and study guides** to enhance student comprehension and provide structured support in project development and academic learning.

Electrical Manufacturing Engineer Intern – ***May 2023 – August 2023***
Cepheid - Sunnyvale, California, United States

- Designed **PCBA**s using **Altium Designer**, and **component-level and subassembly tests** that **lowered the failure rates** of a product by 30%.
- Supported the creation and revision of the Bill of Material (**BOM**) and prepared a Design Change Order (**DCO**) to submit in **Agile**.
- Supported and led **prototype testing**, pilot production builds, and process validation.

PROJECTS

BUILDING AN MP3 PLAYER – ***August 2022 – December 2022***

- Using the manual sheet for the Tiva™ TM4C1294NCPDT **Microcontroller** and my knowledge in **C and ARM Assembly**, I programmed the main parts of the MP3 player.
- Learned about different communication protocols (**UART, I2C, and SPI**) and implemented SPI to integrate the microSD with the microcontroller.

MIPS TO MACHINE LANGUAGE USING PYTHON – ***August 2022 – December 2022***

- Learned how to use Python on **Linux** operating system (using a virtual machine) to implement the conversion between **MIPS Assembly** and Binary Machine Language.
- Planned out my program using flow charts to determine all possible cases easily.
- Tested my code and debugged my code in an organized and methodical fashion.

SKILLS

C++, Python, HTML, MIPS, ARM, CSS, PHP, Circuits, C, MATLAB, Java, Latex Overleaf, Digital Multimeter, Oscilloscope, Waveform Generator, Electronics, Arabic & English, Arduino, Power Bi, Aliutm, Agile, Machine Learning.

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ADDITIONAL EXPERIENCES

MESA TUTOR AND ASSISTANT – ***January 2023 – May 2023***
University of The Pacific - Stockton, California, United States

- Efficiently educated and prepared students with many courses including **C++**, Data Structures, Computer Systems & Networks, and **Python**.
- Encouraged and promoted the success of students by teaching them how to tackle hard projects and assignments.
- Discovered and gained new skills and tools, such as argparse in Python.

WEB DESIGNER – ***May 2022 – August 2022***
The Rose Art Gallery - Kuwait

- Utilized Adobe and Canva to create templates to view the website and determine any possible changes the artist may request.
- Established the website's basic structure using **HTML** and then fabricated the designs and styles using **CSS** and **PHP** to develop a dynamic website.
- Constructed the communication functionalities and features (E.g. Contact Us page) using **Java**.

ADDITIONAL PROJECTS

DEVELOPING A PORTFOLIO WEBSITE (Jasemali.net) – ***December 2022***

- Composed the basic look of the **website** using **HTML**, and then styled it using **CSS**.
- Independently learned how to upload and host the files to the internet (**Github pages** and Google Domains).

HANGMAN GAME ON LINUX OS USING PYTHON

- Used **Python** and parsing techniques to complete the project.
- **Tested** the project and verified that the project will handle all possible inputs.

TIC TAC TOE GAME USING C++

- Implemented a feature where the user can play with another user.
- Created a second option, where the user can play against the computer with different levels of difficulty.

MACHINE LANGUAGE TO MIPS ASSEMBLY USING PYTHON

- Using **Linux** as the operating system, designed and constructed a **Python** program that converts **binary** machine language to **ARM** assembly language.

BANKING SYSTEM USING C++

- Developed a program that allows the user to both create and save accounts (including the information stored in those accounts) using knowledge in both **C++ and data structures**.