Param Chokshi

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Education

Bachelor of Science in Computer Science **Expected date of graduation: May 2022**
G.P.A: - 4.00 (University of South Florida, Honors College, Tampa, Florida)

Relevant Coursework: Programming concepts & Design (JAVA and C++), Object-Oriented Program Design (C++), Data-structures (C++), Operating systems, Database design, Analysis of Algorithms, and Image processing fundamentals.

Skills

Technical Skills- Java, C, C++, JavaScript, SQL, OpenCV, Python, Django, MATLAB, Mulesoft (API creator), Powershell, object-oriented programming, parallel programming, functional programming, CorelDRAW (Graphic designing), Komposer (HTML web application creator), Google App maker, CAD software.

Other Skills- Effective oral and written communication skills, versatile leadership skills, technical writing skills, and trilingual.

Experience

Undergraduate Research Assistant (Biorobotics Lab, RoboBulls) **January 2020 – present**

- Research info: (Department of Computer Science and Engineering), currently working on various robotics project. Main project is updating code for soccer playing robots (for Robocup SSL).
- Currently aiding in reconstruction of the Robobulls source code used for Robocup SSL.
- (summer 2021) Will aid in creating a basic mobile robot for the Dr Alfredo Weitzenfeld's class CDA 4621 Control of mobile robots. The robot implements functionality like Blob detection and SLAM using OpenCV.
- Key skills involved**: C++, Linux, object-oriented program design, GUI development, data structures and algorithms, QT.**

Undergraduate Research Assistant (Lattice Boltzmann Modeling) **January 2020 – June 2020**

- Research info: (Department of Environmental engineering), currently developing simulation for fluid flow (using lattice Boltzmann's method).
- Aided in converting Matlab code to C++ code. The project (code) was used to simulate fluid flow in porous media.
- Key skills involved : **C++, Matlab, Fluid mechanics**.

Student Technical Assistant (Developer) (University of South Florida I.T., Operational Technology) **February 2020 – present**

- The position involves working as a student developer in an **agile environment** for USF I.T.'s operational services.
- Have worked on developing and updating **Web APIs using Mulesoft** (Java based IDE for APIs) and Anypoint platform.
- Have worked with technologies like **SQL, MSSQL, JSON, Azure, JIRA and Powershell.** The role also involves working on systems integration projects.

Teaching Assistant for Foundations of Engineering Lab (EGN 3000L) **January 2019 - January 2020**

- The position involved grading and assisting students in a hands-on service learning/community engagement engineering course.
- Major role in the position was to aid students in **App development project, Robotics (based on Arduino) project**, Remote sensing project, Fuel cell project, and to help design contents for the class. As an assistant, helped and assisted a class of approximately 60 students and have provided support for App development project and other projects to approximately 75-100 students.

Projects and papers

CubeSat (Ongoing satellite research project, National Grand Challenge Scholar Project) **February 2020 - present**

- **CubeSat** is a standard for compact satellites used for multiple purposes (form educational to tele-communicational, remote sensing, and space research). The project is USF's attempt to create a satellite with wireless internal structure, and media transmission functionality.

- Currently Working with a team of diverse engineering undergraduates, supervised by Dr Robert Bishop, for our main project to aid in solving the grand challenges in engineering. The project requirement involves working on SBCs like **Raspberry P**i and software development for the launching and functioning of the satellite.

Image Processing Tool **January 2021 – May 2021**

- Created software tool using C/C++ for performing basic and advanced image manipulation for a class project.
- Implemented filters like smoothing, thresholding, binarization, color scale conversion, and histogram stretching using c++ algorithms.
- Implemented advanced functions like Sobel and canny edge detection, histogram equalization, QR code scanning, etc. using OpenCV.

Online Enterprise Information System **February 2021 – May 2021**

- Designed a full-stack online Enterprise system, as a part of a class project.
- Designed and implemented a database using PostgreSQL, and PGadmin.
- Designed the application layer using python's Django framework.
- Designed the frontend using Bootstrap templates.
- Designed and implemented functionalities like authentication, privilege levels and views, wrote application layer functions, and database layer stored procedures.

Smart Mirror (Project Leader) (Engineering Expo USF 2019) **January 2019- March 2019**

- The mirror was made by using **Raspberry Pi and various software A.P.I.s** to create a mirror which displays time, weather, calendar, schedule, plays audio, and can be remotely controlled by voice commands. The mirror can remotely control all the voice control enabled devices (e.g., smart lights, coffee machine etc.) in a small workspace.

E-Sash for Girl Scouts (Project Leader) (Affiliated with Girl Scouts of west central Florida) **August 2018 – December 2018**

- The App was designed to inspire more girl scouts to take higher education in S.T.E.M fields. The app tracked badge progress for Girl scouts, provided e-forms for cookie sales, and connected them to reading and learning sources based on IT and computer science. Core technology used – **Google App maker, Html forms, Adobe Photoshop, TinkerCad and CSS.**

Leadership and Affiliations

President, Robobulls **April 2020 - present**

- Presided over weekly meetings in which we discussed future projects, and updates on current progress of ongoing projects.
- Organized Engineering Expo projects and gave presentations to hundreds of school students

Fundraising Chair, Engineering Student Council (affiliated with NAESC) **April 2021- present**

- Represented the college of engineering Dean and the USF student government.
- Will be responsible for maintaining and creating company and organization connections outside USF.
- Will develop a process for conducting large scale events like conferences, expos, and competitions for Student organizations.
- Will host the annual Regional Conference of NAESC's southeast region.

Vice Chair, Engineering Student Council (affiliated with NAESC) **April 2020 – May 2021**

- Represented the college of engineering Dean and the USF student government.
- Delegated for the Engineering student organizations at USF Student government policy meetings.
- Presided over Engineering Student Councils General body meetings, which addresses budget process for STEM organizations, and opportunities for STEM organizations within and outside USF.
- Planned and organized events to increase student retention in engineering majors, and to increase student interest in professional organizations and projects outside class.

Finance Chair, Engineering Student Council (affiliated with NAESC) **April 2019- May 2020**

- Represented the college of engineering Dean and the USF student government.
- Presided over the annual budget process for all engineering organizations.
- Created budget allocation standards for STEM projects for all STEM related student organizations.

External Events Coordinator, ACM USF (Association for Computing Machinery) **August 2018- May 2019**

- Planned managed and executed different events inside and outside USF. Events ranged from technical workshops to industry speaker sessions.

Treasurer, ACM USF (Association for Computing Machinery) **August 2018- May 2019**

- Managed the financial aspect of the organization's proceedings. Secured funding for various events and projects hosted by the organizations.

Honors and Awards

- USF Green and Gold Presidential Scholarship
- National Grand Challenge Scholar at USF (program by NAE)