HARSH KHUBCHANDANI

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EDUCATION:

University of Southern California   **Los Angeles, CA**
B.S. - Bachelor's in Computer Science and Business Administration: Minor in Cloud computing with DevOps
Major GPA: 3.7 | **CGPA: 3.6**
Honors: USC's Dean list (All semesters), Alpha Lambda Delta (USC's honor society);
Relevant links: GitHub | LinkedIn
Relevant Coursework: Data structures and algorithms, Cloud computing with Dev ops, Discrete math, Linear algebra, Object-oriented programming, Principles of software engineering, Data Validation, and Business Valuation modelling

SKILLS:

Programming Languages:	C++, Java, Python, JavaScript, SQL, HTML, CSS
Frameworks/libraries:	Pytorch, Scikit learn, TensorFlow, NumPy, Pandas, React.js, Node.js, Jest, MOCHA
Tools:	Git, GitHub, VSCODE, DBeaver, JIRA, Kubernetes, Docker, Bitbucket, POSTMAN
Database:	PostgreSQL, MySQL, PHPMyAdmin

PROFESSIONAL EXPERIENCE:

ASML   **San Diego, CA**
Machine learning intern   *Jun. 2023–Aug. 2023*
- Led scanner team of 5 other interns that focused on improving efficiency of Tin droplet scanner and cameras by 5%
- Analyzed data generated by metrology systems using TensorFlow image recognition to improve tin droplet detection
- Leveraged Simulink and MATLAB services to simulate the tin droplet rate of switching from a 60khz system to 100khz
- Collaborated with the embedded software team to enhance and maintain the python codebase of the lithography systems
- Led daily scrum meetings with other interns to track performance of metrology cameras and conducted weekly code reviews

Powerweave   **Mumbai, India**
Software engineer intern   *May. 2022–Jul. 2022*
- Built and maintained EWIZcommerce, a B2B e-commerce platform with built-in marketing automation and restful APIs
- Implemented time series RNN's using PyTorch trained on historic traffic data to a webpage to help predict future traffic
- Implemented Apriori algorithm to understand returning purchases and increase retention using data visualization by 15%
- Acted as a key troubleshooter to fix high priority bugs in the ewiz platform using debugging tools like GDP and Val grind

Practo   **Mumbai, India**
Software engineer intern   *Feb. 2022–Apr. 2022*
- Aided in developing a React web-based to allow doctor consultations and find the closest doctor according to the location
- Leveraged PostgreSQL databases in the healthcare platform to facilitate the secure storage of critical patient information
- Conducted analysis of PSQL queries to identify performance bottlenecks resulting in 15% reduction of query execution time
- Assisted the quality assurance team in identifying test cases to enable a concise functional test of developmental deliverables
- Created parallel testing scripts using MOCHA for querying and updating of data which lead to 12% decrease in testing time.

PROJECTS:

ASML "Concepts" project management web tool   Present
- Engineering a web tool for project management that uses microservices and RESTful API principles, hosted on AWS RDS
- Created stored procedures using PostgreSQL to extract project data and Redis to cache leading to 82% runtime improvement
- Implementing deployment of the web app through a Kubernetes cluster and Docker containerization hosted through EC2

Postcard exchange social website | **Website** | **Source code**   *May 2024*
- Developed the servlet APIs for a postcard exchange website that allows sharing and viewing of postcards sent in real-time
- Built multi-threading through a web-socket that allows users to view recent activities live through a TCP connection
- Created the Gallery from our Object storage that uses a CDN to cache the postcards close to users achieving cache hit of 80%

USC class scheduler | **Course scheduler** | **Source code**   *Mar 2024*
- Created a calendar scheduler for USC college students using Spring boot for the backend and React for frontend
- Hosted through an EC2 instance and connected to Postgres using AWS RDS and S3 to store the frontend
- Leveraging the MVC framework, students can query the database that stores all information related to their specific courses

AVL and BST visualization | C++ | JavaScript | React   *Jul 2023*
- Developed a fully functional BST(binary search tree) and AVL tree to manage large datasets of strings and other types
- Created an interactive and intuitive user-interface to allow users to insert, delete and search for elements within the trees
- Utilized object-oriented principles such as Loose coupling and abstraction to inherit from basic properties from BST class