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Jacob Varghese

Education

expected 2018   **Master of Computer and Information Technology (GPA: 4.0/4.0)**
University of Pennsylvania, Philadelphia

2010 - 2014   **Bachelor of Technology (GPA:8.93/10.00)**
Electrical and Electronics Engineering
National Institute of Technology, Karnataka, India

Related Course Work
Programming for the Web, Database & Information Systems, Software Systems, Big Data Analytics,
Data Structures and Software Design, Introduction to Computer Systems

Work Experience

2016 - Present   Web Developer Intern
Web Unit, Libraries, University of Pennsylvania,

2014 - 2016   Business Technology Analyst
Deloitte Consulting LLP, India

Skills

- Programming   JAVA, Python, C, Ruby, Matlab, ABAP
- Web Technologies   HTML, CSS, JS, AJAX, JQuery, SQL, Bootstrap, Ruby on Rails, Drupal 8, SAPUI5
- Operating Systems   Linux, MacOS, Windows
- SAP   ECC(ERP Central Component), CRM(Customer Relationship Management)

Projects

Secure patient/provider web portal

- Developed www.MedimailHub.us , a web application that provides a secure portal for medical physicians to interact with and provide consultations to patients and other physicians remotely. Built a secure messaging , document and reports sharing and video chat (OpenTok) features that strictly adheres to HIPAA laws. Utilizing Ruby on Rails as the base framework, PostgreSQL for the database, the application incorporates most major modern web technologies and is highly optimized for mobile browsers. Implemented push notifications using Firebase Cloud Messaging.

Recruitment availability tracker Web and Mobile application

- Lead a team of full stack developers to design, develop and deliver two web applications that is currently being used by Deloitte US-India to help manage resource's availability for their recruitment drives. Developed the web page using SAPUI5 framework and ported it to a mobile app across platforms using PhoneGap with Cordova plugins. Implemented the back-end on a Netweaver Gateway system that communicated with the UI using Open Rest Interfaces via OData protocols. Handled and analyzed relationships to model the persistence MySQL layer using normalized database concepts.

PennSkype - A peer to peer Skype clone

- Built a peer to peer Skype clone in Java for video calls over the same network. Principal Component Analysis based image compression was implemented using the Java Math(JAMA) library to reduce latency in data transmission. Transmitted the compressed data between IPs with socket programming. User Interface was designed using MVC principles in swing. Handled concurrency for simultaneous transmission, compression/reconstruction, and display with threads.

SAP ABAP developer for MNCs in the Textile and Healthcare Industries at Deloitte

- Worked as an SAP resource involving translation of business requirements to robust code. Part of two successful project cycles including design, implementation, testing and delivery phases and worked in teams with members from across the globe. Developed code that directly impacted the client's business and reduced supply chain workflow times to less than 10% of original. Adhered to strict performance along with sterling OOP coding standards for a client that had a previous failed attempt to computerize the business.

Optimized data transfer in Multimedia Wireless Sensor Networks

- Optimized data stream (Music and Video) using Principal Component Analysis based reduction techniques. Performed a detailed analysis on the implementation of the algorithm to ensure that it was both scalable and robust. Successfully decreased the data size required to be transmitted for a multi channel audio signal and multi frame video. Deduced that the algorithm worked successfully for compression by half but is not so effective for compression by one fourth in videos.

Extracurricular Activities

- Joint Convener of the IEEE NITK(National Institute of Technology , Karnataka) student branch. Vice Chairperson of CAS of IEEE NITK student branch.

- Elected Branch Representative and a member of the Students' council in NITK for three consecutive years.

- Finalist at the Honeywell Young Innovator's competition with students across disciplines from all over India participated.

- Convener of Technites at Engineer a technical festival conducted by NITK,Surathkal catering to a participation pool of over 6000 students from 150 colleges across 65 countries.