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Jacob Varghese

Work Experience

2014 - 2016 Business Technology Analyst
Deloitte Consulting LLP, India

Education

expected 2018 **Candidate for Master of Computer and Information Technology (MCIT)**
University of Pennsylvania, Philadelphia

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

Skills

- Programming — Java, C, Ruby, ABAP
- Web design — HTML, CSS, JS, AJAX, JQuery, Bootstrap, Ruby on Rails, SAPUI5
- Interfaces — REST, OData protocol
- Scientific — Matlab, Scilab
- Hardware — Arduino, TI's MSP430
- SAP — ECC(ERP Central Component), CRM(Customer Relationship Management)

Professional Projects

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 resources' 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 ambiguity and analysed relationships to model the persistence MySQL layer using normalized database concepts.

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 workow 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.

Projects

Optimized data transfer in Multimedia Wireless Sensor Networks (2014)

- Optimized data stream (Music and Video) using PCA 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.

3D Sound Spatialization of concert music (2013)

- Orchestraic effect was given to music by characterizing different directions to different instruments. Implemented the HRTF "Brown and Duda model" in Matlab and compared results with the KEMAR head. Improvised on the previously existing models to get better performance both mathematically and analytically.

Smart Home Engine - SHE (2012)

- Built a cost effective security and smart home system for an average Indian home. Utilized webcams placed at prime locations in the house with proprietary software running on a beagle-board that utilized Open-CV libraries for its image processing. Interfaced switches with solid state relays that were controlled from an app as well as from a website. One of the top five finalists at the "Honeywell Young Innovator Challenge(2012)" - an annual National level competition conducted by Honeywell Technology Solutions Lab.