Varun Parashar

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Education

2011–2015 **Bachelor of Technology**, *Manipal University*, Jaipur, *GPA − 8.62* .
Specialized in Computer Science and Engineering.
- Thesis: Skill-Gap Application and Recommendation system.
- Minor: Hospital Prescription system.

Patent/Publications/Conferences

- V. Parashar, N. Rajput, and D. Contractor, "System and method for visualization of a non linear, Multi-Resolution graph" 2016. US Patent Application[Patent pending]. **Link**
- V. Parashar, A. Aggarwal, and D. Contractor, "AudioVisual Source Code Documentation" 2018. US Patent Application[Patent pending].
- K. Ahuja, R. Islam, V. Parashar, K. Dey, C. Harrison and M. Goyal, "EyeSpyVR: Interactive Eye Sensing Using Off-the-Shelf, Smartphone-Based VR Headsets" in UbiComp Adjunct, ACM, 2018. **Link**
- Mobile Solutions, IBM-Regional Technical Exchange, India 2015.
- IBM-iCARE, Cognitive Computing Winter School, India 2015
- Secured 2nd position in Dataview Challenge organized at Conference on Management of Data, 2016(COMAD), Pune. **Link**
- Work nominated for Accessibility award(Awarded by President of India) in 2017 and got selected for the final round.

Skills

Interests	Mobile First, Web Systems, Intelligent Computing, Knowledge Management, Decision Science, Application Development
Programming Languages	Swift, Java, C/C++, Javascript, HTML, CSS, Angular JS, Node JS, Express JS, Servlets, JSP, Python
Tools and Technologies	Bluemix, IBM financial Sentiment Service, IBM Watson analytics,Watson Conversation Platform, XCODE, Eclipse,NetBeans IDE, Sublime Text Editor
Database	MySQL, Derby, IBM Cloudant, MongoDB, IBM DB2, CouchDB
Operating Systems	OS X, Windows, Linux

Technical Certifications

- EMC Academic Associate, Cloud Infrastructure and Services, EMC2 (2014).
- Certification in MySQL from Big Data University.

Work Experience

Aug 2017 - June 2018 **Software Research Advisor** at Broomling Technologies, Jaipur
I have been working at a lead role guiding the developers on the projects and developing the skeleton codes for various freelancing projects in iOS and various web framework projects.

Aug 2015 - Aug 2017 **Research Scientist** at IBM Research Lab, New Delhi
I have been driving research agendas at IBM in the area of Education/Media, **Mobile First Initiative (Apple-IBM Partnership)**.I also spearhead the iOS development efforts of our group.I am well versed with mobile and web technologies like iOS/Node.js/Javascript/Angular.js etc besides experimentations in Java and Python. I have been driving software engineering initiatives which involved frameworks on the iOS platform and leveraging RESTful APIs for some of the artificial Intelligence services for IBM, some of them being the Watson Dialog Service, the newly acquired AlchemyAPI and the other Bluemix Watson Services.

Jan-July 2015 **Bachelor Thesis** at IBM Research Lab, New Delhi
Developed an iOS Application for *Skill Gap analysis and Personalized Learning Content* that recommends a set of learning content to aid students in learning. It also incorporates *skill gap analysis* which after knowing the present skill set of user recommends a most optimal way to attain a particular skill of interest. It analyzes the student's potential and suggests learning content based on his/her previous performance.

May-Jul 2014 **Summer Intern** at HCL Info systems Ltd, Noida
Creating a Dynamic web project is the starting point of learning various Internet technologies. Studied various frameworks like JSP Servlet and basic overview of Struts and worked on developing java server pages, their JDBC connections on various projects.

Projects

Watson Developer Cloud
Watson Developer Cloud is a centralized platform hosting different cognitive assets like solutions, services, libraries, tools, models etc. Having a common framework for all the **Machine Learning Cognitive services** with easy to understand interface methods can help developer to save considerable amount of time during development phase. WDC framework provides us the following features:

1. All services at one place.
2. Native interfaces to consume WDC services easily.
3. Common authentication channel.
4. Delivers all service updates as single update of framework.
5. Auto Response Parsing (JSON).
6. Easy to distribute and update by cocoapods.

Intern Portal

Developed the complete end-to-end application that is used to hire the interns in the IBM Research Lab. The application is created with the front end on AngularJS and backend on NodeJS and the database as MongoDB. The application is currently deployed on IBM Bluemix i.e. Cloud IBM Platform.

Cognitive Career Counselor

Working on creation of an iOS and web application that helps in providing variety of career role/job options for a candidate to choose from, along with a scientific way of ranking these, based on alignment with the candidate profile.The solution is shown to make effective recommendations in terms of additional skills the candidate can try to acquire to be successful in that role or job, along with the recommendation from where to acquire those skills through Machine learning algorithms. The application also requires crawling the collection jobs that help create a certain dataset for providing the input to the cognitive counselor application and recommend the students of the jobs. The data is stored in the form of non structured query language(NoSQL) database and then API's level access is through Java".

Skill Gap Analysis and Personalized Recommendation

Developed an iOS and web application that takes student's current statistics and target skill set as input, analyzes it and then suggests an optimal path to reach the target skill set. In addition, it also considers the learning capacity along with previous scores of the student to provide a personalized learning recommendation.The application also scans and thereby extracts the "Job requirements" from a QR code. The use case that I have worked upon is about verifying if a candidate's skill set meets the eligibility criteria for a particular job position. For a given job profile, it also reports back minimal skill set that the candidate needs to acquire to be eligible for the candidature.The data is stored in the form of structured query language(SQL) database and then API's level access is through the the javascript framework "Node.js and Express.js"

Disaster Reporter Application

The motivation behind developing the application was to understand the unique value proposition of mobile for data capture as opposed to content delivery in disaster situations and Collaborative content creation and verification as opposed to single point of creation in disaster situations. The iOS application captures the relevant data(including images which a user can upload) from the person and stores all of them and then displays the data location graphically on a Google map which helps administrators accurately visualize and pinpoint data in a particular location. The data is marked on the map in the form of markers and further information (name, description) is displayed by tapping on these markers. The backend scripts are written in PHP which are used for storing the data into the database

Biometrics and Gaze Tracking using smartphone cameras in Low-cost VR Headsets

Working on eye-Gaze tracking problem where the primary tasks are to :

1. Identify and verify (authenticate) VR users. The VR-camera can see the eye region, the iris and the periocular zone, which can be used for identification.
2. Understand the user profile: the entire user profile might not always be necessarily available, and there could be other issues such as biological versus chronological aging.
3. Determine and track the user attention in-session, which will lay a foundation to improve the personalization of content dynamically as the session evolves.

Positions of Responsibility

Jan 2016	**Mentoring an Intern** at IBM Research Lab
Aug 2015-Aug 2017	**Core Member of IROLICK**, the CSR activity committee at IBM Research Lab
Oct 2016	**Chairperson of Web Committee** at I-CARE 2016 held in Bangalore.Key responsibilities involved development and deployment of the web portal for the event. **Link**
March 2014	**Chief Student Coordinator** at Abhivarta'14, Sports Fest Manipal University Jaipur