Manshul Belani
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EDUCATION QUALIFICATIONS

Ph.D. – Human Computer Interaction   Since Jan 2018
Indraprastha Institute of Information Technology, Delhi

Bachelor of Technology in Computer Science   Jul 2009-Jun 2013
Jaypee Institute of Information Technology, Noida, India   GPA: 8.2

All India Senior School Certificate Examination   Mar 2009
St. Anthony's Senior Secondary School, CBSE, New Delhi, India   12th Grade: 91

All India Secondary School Examination   Mar 2007
St. Anthony's Senior Secondary School, CBSE, New Delhi, India   10th Grade: 92.2%

WORK EXPERIENCE

Organization   : Indian Institute of Technology, Delhi   May 2015 – Dec 2017
Profile   : Research Associate
Projects

- **NVDA (Non Visual Desktop Access)** – Developing solutions for a Python and C++ based open source screen reading software NVDA
  - Designing, developing and testing solutions to improve accessibility of Productivity Applications like Microsoft Office, digital STEM content, statistical graphics, web content.
  - Developing add-on modules using off the shelf APIs and accessibility frameworks.
  - Conducting user studies for identifying issues and validating solutions for effectiveness and ease of use.
  - Developed and implemented more than 15 enhancements and fixes to the NVDA source code

- **RAVI (Reading Assistant for the Visually Impaired)** - Developing an accessible document viewer focussing on accessibility of Math content, diagrams and Indian Language content
  - Developing Java based modules for segmentation of data elements (text, images, mathematical content, tables, graphs) in a digital document
  - Conducting User studies to determine the need, structure and relevance of image descriptions Augmenting image captions and descriptions using existing image components.
  - Leading six student teams working on various modules of the project.

Organization   : Dell International Services, Noida   Nov 2013 – May 2015
Profile   : Svc IT Dev Program Senior Associate II
Projects

- Developed a solution to automate skimming of capacity reports using Visual Basic for Excel.
- Developed a solution to automate extraction of server names from zone names using Visual Basic for Excel.
- Provided Level1 support to clients including Dial Home, Monitoring, and Reporting.
- Trained in ITIL, SAN basics, EMC Clariion, Symmetrix, Dell Compellent, Equallogic, NetApp, VNX and IBM DS Series.

INTERNSHIPS

Intern at Beehive Systems Pvt. Ltd. from June 2012 – July 2012:

- Created a Banking System for the company using Microsoft Technologies, on C#.net.

Intern at Tata Consultancy Services from June 2011 – July 2011:
Worked on E-Migrate project of Overseas Employment Division of Ministry of External Affairs (MEA), Government of India.
- Designed, developed and tested web pages to automate the current emigration processes and eco-system in India.

PROJECTS

Surface Technology with Mobile Connect: Cost Effective Natural User Interface
- Developed a touch screen-based solution for computer-mobile or mobile-mobile data transfer.
- Integration of Java based interface with Android applications for mobile interaction, OpenCV to create an imaging touch screen and infrared sensing technologies for device detection.

DescribeIt: Generating descriptions of visual content on web for Blind and Visually Impaired users
- Developed a solution to fetch descriptions for web images using cognition APIs
- Tested the solution with the NVDA Add-On community for validation, refinement, usability and effectiveness

noWhinge: A universal portal to redress public civic grievances
- Developed a web-based platform which automatically segregates civic issues and forwards them to respected authorities for Designing Human Centered Systems course

Verbose: A tool to teach context-based intonations for English as Second Language (ESL) speakers
- Developed a mobile based educational app through four-part iterative design process for teaching context-based stress timed intonations to ESL speakers having syllable timed first language.

PUBLICATIONS

Template Based Approach for Augmenting Image Descriptions, A Chahal, M Belani, A Bansal, N Jadhav, M. Balakrishnan/ International Conference on Computers Helping People with Special Needs, 2018, Linz, Austria.
DescribeIt: Making web images more accessible with NVDA, M Belani, D Kaushal, M Agrawal, M. Balakrishnan/ Accepted for presentation at 33rd CSUN Assistive Technology Conference, 2018, San Diego, USA. – First and presenting author
Microsoft Excel ChartsTM Accessibility: An Affordable and Effective Solution, S Gupta, M Belani, D Kaushal, M. Balakrishnan / Digitization and E-Inclusion in Mathematics and Science 2016, Kanagawa, Japan – Presenting Author
A Cost Efficient Solution for Surface Technology with Mobile Connect, N Sharma, M Belani, I Chawla / I.J.Modern Education and Computer Science, 2013, 9, 3237
Wireless Vertical Handover Between GSM and Wi-Fi Standards Using UMAN, N Sharma, M Belani / International Journal of Engineering Research and Applications (IJERA) Vol. 2, Issue 6, November-December 2012, pp.651-656

EXTRA-CURRICULAR ACTIVITIES

- Organizing member and paper submission coordinator at Empower 2019 – an assistive technology conference co-organized by Assistech, IIT Delhi and Microsoft
- Organizing member, website and paper submission coordinator at Empower 2018.
- Organizing member of 2nd Indo-US workshop on Emerging Accessibility Technologies for the Blind & Visually Impaired
- Organization of community events like Avlokan at IIT, Delhi
- Successfully completed Spanish Level 1 course (scored 81.8%) from Instituto Hispania.
- Project mentor of more than 5 student projects at AssisTech Lab, IIT Delhi
  Projects include conversion of digitized Hindi books to standard encoding formats, Unicode text to Braille conversion, audio content generation for tactile diagrams using cloud sourcing, enhancing table navigation with Talkback.