

Sunny Kachhia

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Post graduate in Computer Science and Engineering, Full Stack Developer, passionate about programming, with strong interpersonal skills for working in a team and delivering end-to-end engineering product.

Professional Experience

Aindra Systems Pvt. Ltd. Bangalore, India May 2014-current.....

Senior Product Engineer

o **Automated attendance system with face recognition and tracking**

- Smart Attendance is a product that provides a solution for tracking attendance and proof of attendance by using face recognition algorithms.
- Led the design and development of an end-to-end cloud based system for attendance, automated through computer vision. Its a patent pending technology.
- Designed a scalable architecture for the product that is now used in several places in India.
- Single-handedly developed **SaaS based web-interface** for users to interact with the attendance system and generate reports; it uses their feedback to continuously improve accuracy of the model.
- Designed and developed **android based mobile application** for users to capture and push attendance data. It has features of face tracking, face detection, face-cropping, geo-tagging, image compression, timestamp information and works offline as well. Also added automated bug reporting mechanism in the app.
- Integrated google analytics with the web-interface and mobile application.
- Implemented firewall security on production servers using iptable rules.

o **Productization of biometric face verification system**

- Designed and setup the entire architecture required for the product including servers, database models and API design.
- **Development of Restful APIs and API based SaaS** to provide face recognition and face verification as a service to customers. It has multi layer authentication and authorization policies. Implemented using **Hibernate, MySQL** tech stack and deployed on **JBOSS app server**.
- Wrote **JSON and XML parsers** for front end and back end in order to read and understand the interfacing data.

o **Productization of automated detection of cancerous cells through staining and imaging**

- Developed an embedded system to automate the functions of a stepper motor in the auto stainer which is responsible for performing various staining processes involved in cervical cancer using blood samples. It includes rotary motion as well as linear motion of the motor and controlling its speed and velocity.
- Built an intuitive touch based user interface in python using **Kivy framework** for the Auto stainer device.
- Successfully showcased the prototype at International Knowledge Millennium Conference held at Hyderabad International Conventional Center, Hyderabad, India on 24th October, 2016, organized by IKP knowledge park.
- Successfully built one more concept of Auto Stainer which is **IoT based** and can be controlled from a mobile device using bluetooth module.

o **Web based cancer cell annotation tool on the concept of telepathology**

- Designed and setup the entire architecture required for the product including servers, database models and API design.
- Developed an intuitive UI for pathologists to analyze and mark cancerous cell on a Whole Slide Image captured from glass slides containing cervical sample.
- This project has already received grants from Biotechnology Industry Research Assistance Council (BIRAC), Biotechnology Ignition Grant Scheme (BIG), Villgro Innovations Foundation and Indo-US Science and Technology Forum (IUSSTF).

Shreeji Infosoft, Vadodara, Gujarat, India July 2012 - May 2013.....

Project Intern

o **Reduced the overhead of offline booking system**

- Designed and developed a System for Travel agents to manage online booking in different Branches.
- Built a web-interface for users to plan their own travel and then do the necessary bookings. Separate login for travel agents to modify price chart, vehicle information, tour packages and availability of the tour plan.
- created a future proof database, where travel agencies can add type of travel their organization serves; could be roadways, seaways or air transport.
- We were able to develop a Web based solution for the tours and travels agencies which caters to the automation of all the activities carried in the agencies/organizations.

Technical skills

- **Programming Languages:** *Proficient in:* Java(30000 LOC), Python(15000 LOC), PHP(2000 LOC), MySQL, JavaScript(3000 LOC), HTML
Extensively used: C(3000 LOC), C#.NET(1000 LOC), CSS, Shell Script, VB Script, ASP.NET, TeX
- **Frameworks:** Hibernate, JBOSS, Apache, Kivy, Django
- **Libraries:** OpenCV, androidCV, numpy, tkinter, Google's geolocation API, gson, ACRA, Kivy
- **OS & IDEs:** Linux [Eclipse, Android Studio, Pycharm, vim, nano, gedit], Windows [Adobe Dreamweaver, Visual Studio, notepad++, Dev-C++, TexMaker], Mac
- **Tools:** git, bitbucket, JIRA, Google Apps, Trello, WinSCP, PuTTY, FileZilla
- **General Professional Skills:** Good presentation skills, Leadership skills, Can manage a team in Agile manner, Strategic Planner, Works well in a team.
- **Other:** Good Problem solving skills, communication skills, Can write well organized and structured reports.

Academia

- **Nirma University** **Ahmedabad**
M.Tech. in Computer Science and Engineering, GPA:7.30/10.0 *July 2013-May 2015*
Courses: Advanced Algorithms, Artificial Intelligence, Advanced Compiler Design, Cloud Computing, Modern Databases, Computer Architecture and Parallel Programming, Real Time Systems, Web Search and Mining, Distributed Parallel Systems
- **Gujarat Technological University** **Ahmedabad**
B.E. in Computer Engineering, GPA: 7.20/10.0 *2009-2013*
Courses: Advanced data structures and algorithms, Theory of computation, DBMS, Networks, OS, Compilers, .NET technologies, JAVA technologies, OOPS, Mathematics, Computer Graphics

Tests.....

- **GATE 2013 qualified with 97.27 percentile**

Notable Projects.....

- **Deployed and integrated Face recognition based attendance system for the following clients:**
 - Dusters Total Solutions Services Pvt Ltd (DTSS), Positive Shift, Labournet, AR Rail Vikas
- **Deployed and integrated Face verification based login system for the following clients:**
 - CAP Workforce Development Institute (CAP WDI)
- **Applications of Mobile Visual Identification (Master's project):**
'Automated attendance system with face recognition and tracking'
Guide: Vipul Chudasama, Assistant Professor, Computer Engg. dept., Nirma University
 - I was part of a team developing a Face Recognition based Attendance system that can be used in Enterprise, Health care and Educational institutions to keep record of daily attendances of people.
Build environment: Django MVC 1.7 (Python, HTML, JavaScript, CSS), Java(Client), C++ & PHP.
- **Tours & Travels Management system (Bachelor's Project):**
'Reduced the overhead of offline booking system'
Guide: Reeta Mishra, Assistant Professor, Computer Engg. dept., K.J.Somaiya Institute of Technology
 - Led a team of 3 to conduct a comprehensive survey and study of existing travel booking systems and problems faced by clients.
 - Built a web based solution and made travel booking convenient for users and also reduced lot of management activities and paper work done by the travel agencies.
Build environment: Visual Studio 2010 (C#.NET, MS Visio, MS Access, SQL server 2008)
- **Hybrid Filtering Methods Applied in Web-Based Movie Recommendation System (Master's mini project):**
'Comparative study on various filtering techniques and built a hybrid filtering technique based on benchmarking results'
- **Estimation of Communication rates in MPI (Master's mini project):**
'Developed a Cluster environment for estimating communication rates in message passing interface'
- **Online Student Management System (Bachelor's mini project):**
'A web portal for students and teachers to make information sharing faster and easily accessible'
 - The objective was to ease the communication between students and faculties and improve sharing of notes, articles, publications, textbooks via web. Faculties can also upload video lectures, notices, results etc.
Build environment: Adobe Dreamweaver(html, JavaScript, CSS, PHP)

Relevant interests, activities and achievements

- Won several coding events organized by Hacker Earth and also won hackathon that resulted in job offer.
- Two times Winner of Sudoku competition at college level (2012 & 2013).
- Won 1st prize twice in group dance competition at college level (2011 & 2013).
- Runner-up in MTech Premier League at Nirma University. Have been an integral part of my college cricket team for straight 4 years in B.E.
- Organized blood donation camp and technical seminars during undergraduate studies.
- Worked as Group Co-ordinator of Cultural as well as Technical Festivals in college.
- Member of Indian Society for Technical Education, student chapter. I hosted the inaugural event of ISTE in my UG college.
- Other interest include calligraphy, which I am self-taught, solving puzzles & riddles, Technology enthusiast, cricket lover, music lover, fitness conscious, violinist, gamer and movie freak.

References

- Available on request