SWAPNIL TANEJA

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Education

UC San Diego – MS in Computer Science, (**CGPA – 3.5/4**) (Sep '16 – Jun '18)

- Courses - Algorithms, Data Base Systems, Machine Learning , Neural Networks
- Tata Scholar – Awarded Scholarship for higher education among 50000 applicants in 2016.

Indian Institute of Technology, Roorkee - B. Tech, Electrical Engineering, (**CGPA – 8.8/10**) (Jul '10 – May '14)

- Courses – Data Structures and Algorithms, Discrete Structures, Image Processing, Cryptography
- Secured JEE (Joint Entrance Examination) Rank – 1601 among 460,000 candidates in 2010

Work Experience

Oracle Corporation, Software Developer (Jun '14 – Aug '16)

- Enhanced the automation framework code, Fusion Applications Provisioning, by merging similar procedures and removing redundancies– **ANT, Java**
  Impact: Improved running time of provisioning framework by 20%.
- Built a research project - a tool called **Log Miner** to predict the cause of logged errors using Machine Learning algorithms. Got featured in Oracle Social Network for leveraging IEEE research – **Java, KNN** and **decision trees**.
  Impact: Achieved an **accuracy of 90%,** significantly reducing the time for parsing logs and debugging.
- Wrote Life Cycle Management Read APIs using Introspection and Topology manager APIs - **Java**
  Impact: Used by Patching, Upgrade and E2E automation teams.

Hewlett Packard Education Services, Brand Ambassador, Intern (Jun '13 - Jul '13 & May '12 - Jun '12)

- Secured the Title of Brand Ambassador for two years 2012 and 2013 for excellent performance during internships.
- Developed a website prototype for airline reservation. The task was to implement and test a scheduler for flights from different aerodromes preventing clashes - **Asp.Net, C#, SQL Server**
- Built a robot with an ability to never fall off the table. It can be additionally controlled by a computer and allows chat with other computer controlled bots - **Atmega 16 AVR, IR Sensors**.
  Impact: Solved the problem of limiting the bot within the boundaries and prevention from collisions and falling.

Technical Skills

Languages/Framework - Java, C++, Python, MySQL, Android, Tensorflow(tf), HTML, CSS, Junit, C#

Platform/Software/Tools – Linux, MATLAB, SQL Server, Android Studio, Visual Studio, ANT, Gradle, OpenCV, Git

Projects and Research

Portability Analysis, Text to image Synthesis using GAN (March '16)

- Used a GAN model to generate images of flowers and numbers from Flower and (modified) MNIST – **Python, tf**
  Impact: Tested our hypothesis that GAN is generalizable and portable by empirically generating images.

Improving Recall using features of CNN (March '16)

- Improved Recall of image similarity search using internal representations of CNN (cosine similar)– **Python, Matlab**
  Impact: Improved the average recall from 0.56 to 0.79 using CNN features.

Android Applications (Dec '16)

- Created the following Android apps and optimized the speed of background tasks making the interface more User friendly and Interactive.
  - Weather App: to display weather forecast for preferred location using Udacity API [Link]
  - Hydration Reminder: to promote timely drinking of water by notifying user every 30 min. while charging. [Link]
  - Music Visualizer: to display the higher, middle and lower range of frequencies of a song. [Link]

Hangman (Sep '16)

- Developed a Hangman game to get the next best guess for 5 lettered words from WSJ articles. – **Java, Matlab**
  Impact: Achieved a peak accuracy of 99% on the model for Hangman.

Designing & Building Humanoid Robot (Bachelor's Thesis) (Aug '13- Mar '14)

- Built a humanoid robot having – Locomotion on Wheels, Hand Shake and Face Tracking –DC Motors (wheels) and Servo Motors (face). **Haar Cascade Classifiers (Open CV), Arduino Uno – Atmega 16 AVR**. [Report] [Videos]
  Impact: Achieved a 95% facial distinction while ensuring security of the lab.

One Eyed Robot, Tech Fest Shristi (Jul '13 - Aug '13)

- Implemented facial recognition for passersby on a Webcam mounted on two servo motors tracking the face of human. Used **OpenCV** and **Arduino Uno** for controlled motion of webcam in the 3 degrees of freedom.