SANDEEP CHINDALUR BALAJI

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EDUCATION

- **Arizona State University** *Tempe, Arizona*
  Master's in computer science (MCS) GPA: 3.67/4 *May 2020*
  Coursework: Statistical Machine Learning, Artificial Intelligence, Foundation of Algorithms, Software Security.
- **BMS College of Engineering** *Bangalore, India*
  B.E in Electronics and Communications GPA: 8.05/10 *May 2015*
  Coursework: Data Structures, Object Oriented Programming, Computer Networks, Digital Signal Processing, Signals and Systems.

WORK EXPERIENCE

Machine Learning Engineer | Gnani Innovations (gnani.ai) *Aug 2017 – July 2018 | Bangalore, India*

- **Automatic Speech Recognition [Machine Learning, Python3, Kaldi, Tensorflow, Linux, C++, Speech processing]**
  - Built Speech Recognition System for English on Indian accent using Kaldi open-source framework with a Word Error Rate of 16%.
  - Developed custom interpolated language models for specific domains like Banking using SRILM, KenLM.
  - Designed programs for parallel execution of text cleaning on a corpus of over 1 billion lines using NLTK kit.
- **Speaker Diarization for telephonic conversations [Kaldi, Python3, Speech feature extraction, C++, Bash scripts]**
  - Developed application using Kaldi for diarization of telephone conversations over the noisy environment. Based on i-vector extraction and clustering of those i-vectors.
  - Deployed and exposed APIs for speech decoding on kubernetes clusters which handles 500k requests/second.

Software Developer | Tata Consultancy Services *Dec 2015 – Aug 2017 | Bangalore, India*

- **Oracle Retail Applications [Oracle SQL, PL/SQL, Java, Oracle RMS]**
  - Implemented GST by developing PL/SQL programs for Oracle Retail application.
  - Developed procedures for defragmentation of all the schemas in an Oracle database on 800 GB data.
  - Redesigned the application for continuous integration and finance data flow between Oracle applications.

Academic Tutor | Arizona State University *Oct 2018 – Present | Tempe, Arizona*

- Responsible for tutoring under-graduates on basic key concepts of computer science.
- Tutor for courses like CSE340, CSE355, CSE310 and help them on understanding assignments.

TECHNICAL SKILLS

- **Languages and Libraries:** Kaldi, Tensorflow, Python3, Speech processing, Keras, Shell scripting, Java, C++, Data Structure, sci-kit-learn, numpy, pandas, Matplotlib, Linux
- **Databases:** MongoDB, Oracle 11gR2,12c,10g MySQL, Postgres, SQL
- **Web Technologies:** HTML, PHP, CSS, JavaScript, Bootstrap
- **Tools/Framework:** Nginx, Apache, Uwsgi, Python-flask(REST-API), GIT, SVN, Docker, Kubernetes(k8s)

PROJECT WORK

- **Sudoku Solver - Q learning** *Oct 2017 – Nov 2017 | Bangalore, India*
  - Basic Sudoku solver using Reinforcement learning written in Python3. Built as a personal project using Keras, pandas and numpy packages.
- **Blind Assist - Arduino** *Aug 2014 – Jan 2015 | Bangalore, India*
  - Built attachable device to a cane which guides and navigates while walking on streets through speech for Blind individuals. Tested and resulted with an accuracy of up to 75%.
  - The device was built using Arduino, Bluetooth which connects to an Android phone.
- **Automatic Start/Stop System for fuel efficiency** *Aug 2014 – May 2015 | Bangalore, India*
  - Built a working prototype that automatically starts and stops the four-wheeler during the idle time at parking/ traffic signals.
  - Surveyed fuel efficiency data through the streets of Bangalore and found that it was increased by 8%.

AWARDS

- **Sunhacks '18 - Best IoT hack & 2nd place** *Nov 2018 | Tempe, Arizona*
  Computer Vision application for fall detection of elderly and emergency alert that saves $50/month.
- **Inferno Hacks '18 - 2nd place** *Nov 2018 | Tempe, Arizona*
  Google assistant application to train employees. Uses spaced repetition and vocalization to improve recall by 92%.
- **Hack Arizona '19 - 2nd place in 'AI in Recruitment' category** *Jan 2019 | Tucson, Arizona*
  Platform for the applicants and recruiters that predicts the probability of getting hired/becoming a top performer.