

# Manish Patel

Shiv 11/49-A-10-M, Patel Nagar Colony, Shivpur, Varanasi-221003  
LinkedIn: linkedin.com/in/manishpatel9011

Email : manish.patel.mnnit@gmail.com

Mobile : +91-8800824132

Github: github.com/manishpatel005

## EXPERIENCE

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- **Google LLC** Mountain View, CA  
*Software Engineer Intern* September 2019 - December 2019
  - **Data augmentation for IA model:** Designed and implemented data augmentation techniques to increase performance of Intent Argument model of voice assistant by 14% for low traffic intents.
- **Centre for Development of Telematics** New Delhi, India  
*Research Engineer* August 2013 - August 2018
  - **Emergency Call Session Control Function:** Researched, designed and implemented E-CSCF server of IP Multimedia Subsystem to handle the emergency calls in the network.
  - **Proxy Call Session Control Function:** Optimized the code by modifying data structures and removing redundancies to increase the performance of the server by about 6% (120 calls per second).
  - **Attendant Console System:** Designed and implemented SIP-enabled VoIP application using Java and JAINSIP stack which allowed users to handle multiple lines concurrently.
  - **Session Border Controller:** Implemented a lightweight Command Line Interface using readline library for remote configuration and management of SBC; Created fault-tolerant and highly available systems for MAX-NG systems.
  - **Release generation:** Streamlined the release generation by creating automated tests and providing single interface for updating TARs and patch generation.

## EDUCATION

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- **Texas A&M University** College Station, TX  
*Masters in Computer Science; GPA: 4.0* August 2020
- **Motilal Nehru National Institute of Technology** Allahabad, India  
*Bachelor of Technology in Computer Science and Engineering; GPA: 3.56 (8.31/10.0)* July 2009 - May 2013

## LANGUAGES AND TECHNOLOGIES

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- C++, Python, Java, C, Bash, HTML, Javascript
- Linux, AWS, GCP, Android Studio, Spark, Ruby-on-Rails

## TECHNICAL EXPERIENCE

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- **Emotions On Cloud:** Designed and deployed an active-learning based ML framework on Google Cloud; learns from the feedback given by user in real-time; May 2020
- **Neurite reconstruction of 3D images:** Designed and implemented techniques of 3d segmentation for neurite reconstruction from boundary maps- CREMI Challenge; July 2019
- **TinySearch:** Developed a semantics based search engine using BERT embeddings in Neural Networks project; achieved a Precision@14 score of 0.533; May 2019
- **As You Like It:** Designed and implemented a personalized book recommender system using summary embeddings and improved efficiency by 0.42%(RMSE) of User-Item Collaborative Filtering and by 1.12%(AUROC) of BPR ; May 2019
- **Real-time Face detection and Emotion classification:** Studied, implemented, and compared the LBPH, PCA and Fisherface algorithms for face recognition and integrated it with emotion classifier to create real-time app; Nov 2018
- **Determination of PSAP and Routing of Emergency Calls in IMS:** Co-authored a research paper on alternative mechanism for routing emergency calls in IP Multimedia Subsystem; IEEE-ANTS 2017

## ADDITIONAL EXPERIENCE AND AWARDS

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- **Bumblebee: A Smartkey to your Car:** Awarded 2nd prize in TAMUHack for developing android app for smartcar; Jan 2019
- **Deployment of Broadband through NGN:** Trained in broadband deployment technologies by ITU, Asia Pacific; Nov 2017
- **Competent Communicator:** Awarded by Toastmasters International for competent public speaking; August 2018
- **Best Performer:** Awarded Best Employee of the Year award in the Call Processing Group in C-DOT; July 2016