

NIHAL KUMAR SINGH

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EDUCATION

MS in Computer Science, **Georgia Institute of Technology, Atlanta** 2019-Present
Bachelor's of Technology, **Indian Institute of Technology, Bombay**, CGPA: 8.74/10.00 2015-2019

EXPERIENCE

Language Modelling and Synthesis of Code-Switched text Dec 2018 - May 2019

Guide: Prof. Preethi Jyothi, IIT Bombay (in collaboration with Microsoft Research)

- Created *MovieCS*- a conversational code-switched Hindi-English text corpus extracted from contemporary Hindi movie scripts. Released benchmark performance of state-of-the-art language models aided with synthetic code-switched text derived from heuristic and linguistic theory based methods.

Mercari Inc., Tokyo- Android Team *Software Development Internship* May 2018 - July 2018

- Developed the listing templates feature to auto-fill item information while selling on the Android app of Mercari, the largest CtoC marketplace in Japan. Implemented the Model-View-Presenter (MVP) architecture following Test Driven Development principles. Received a Pre-Placement Offer to join full-time, based on my performance.

Google Summer of Code *MovingBlocks- Terasology* [Official Blog] May 2017 - July 2017

- Developed Lost- a new gameplay mode involving puzzles, traps and exploration based content packed in a newly generated world. Dealt extensively with the Entity Component System and worked on Behavior Trees and Multiplayer logic.

Google Summer of Code and Google Code-In Mentor *MovingBlocks- Terasology* '16, '17, '18 and '19

- Mentored the multi-world and the L&S Capture The Flag project in GSoC '18 and '19. GCI mentor since '16. Nominated to represent the organization at the GSoC '18 Mentor Summit held at Google HQ, Sunnyvale, CA.

PROJECTS

NeurIPS 2018 Pommerman Challenge *Reinforcement Learning Course Project* [Report] Fall 2018

- Investigated several strategies for multi-agent learning problems; used imitation learning approaches on the Pommerman platform. Designed agents based on Deep Q-Learning from Demonstration and Proximal Policy Optimization.

Voice Conversion *Machine Learning Course Project* [Report] Spring 2018

- Built a pipelined approach to convert one person's voice into another person's voice. Proposed a RNN based deep learning approach to convert source waveform to phonemes and further phonemes to target waveform.

InstiApp *Open Source, IIT Bombay* <https://insti.app> Jan 2018

- Led the ideation and development of InstiApp- the app for students of IIT Bombay, consisting of the RESTful API, Angular Progressive Web App and the Android App. 10K+ downloads on PlayStore and 5K+ daily active users.

Secure Authenticated Fast Exams Application *R&D Project* <http://safe.cse.iitb.ac.in/> Fall 2016

- Worked for the development of the SAFE Android application that facilitates online paperless tests in educational institutes where multiple devices concurrently connect to a Wireless Access Point.

ACHIEVEMENTS

[2019] **iHack-** Matic Prize

[2017] **Yahoo! Japan hackathon-** Yahoo! Prize

[2016] **Microsoft Code.Fun.Do-** Runner Up

[2016] **Hack InOut-** 5th Place

[2017] **Ubisoft Game Jam-** Winner

[2017] **Digital Ocean Campus Champ-** Finalist

[2016] **Kandy Hackathon-** Runner Up

[2015] **Lenovo Game Jam-** 2nd Place

POSITION OF RESPONSIBILITY

Web and Coding Club, IIT Bombay *Manager* Apr. 2016 - Mar. 2018

- Led an institute wide team of 22, as part of one of the biggest college technical clubs in India, to conduct hobbyistic programming activities in the institute. Organized multiple talks, workshops and competitions. Awarded the Institute Organizational Color 2017-18.

TECHNICAL STRENGTHS

Comfortable C/C++, Python, Java, Android
Familiar Unity, Django, OpenCV, Bash, Ruby, JavaScript
Software & Tools Git, Adobe After Effects, NCH Video Pad, Adobe Photoshop

MISCELLANEOUS

Sports Swimming: completed 12 kms in a 12 hour Swimathon; Inter-school Football player; Running
Interests Music, Gaming, Videography and Travelling