# Varsha Chandrasekhar Bendre

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## Education

**RMIT University** — Feb 2020 – present, Melbourne, Australia

*Masters by research in Artificial Intelligence*

- Recipient (Masters for AI Scholarship for Indian and Sri Lankan Students)
- Minor thesis: Federated learning for Human mobility models
- Payload team Member of HIVE(RMIT's student-led rocketry team)
- Co-founder of RMIT Data Intelligence Squad
- GPA(Year 1): 3.3

**Sir.MVIT** — Aug 2015 – Jul 2019, Bangalore, India

*Bachelor's in Computer Science*

- **Electives**: Artificial Intelligence; Data mining & Data Warehousing; Digital Image Processing;
- **Undergraduate Coursework**: Operating Systems; Databases; Algorithms; Programming Languages; Computer Architecture; Calculus III.
- **GPA**: 3.5

## Skills

**Programming Languages**
- *Python*
- *C*
- *Java*
- *Javascript*

**Transferable skills**
- *Communication skills*
- *Teambuilding*
- *Leadership skills*

**ML Libraries and Frameworks**
- *TensorFlow*
- *Pytorch*
- *Theano*
- *Keras*
- *WEKA*
- *Scikit-Learn*
- *Numpy*
- *Pandas*
- *Mlflow*

**Testing**
*A/B testing*

**Framework**
- *Flask*
- *Laravel*
- *Bootstrap*
- *ExpressJS*
- *AngularJS*
- *React native*

**Databases**
- *MySQL*
- *MongoDB*

**Platforms**
- *Windows*
- *LINUX*
- *UNIX*

**Version control**
*git*

## Professional Experience

**Data Scientist - Intern** — Aug 2020 – present, Melbourne, Australia

*AI Australia*

- ***Project lead***: Behavioural Factorization through Conversational Analysis project, NLP to analyze the personal messages and identify the leads.
- ***Team-member:*** Warehouse Routing using Unity ML-Agents

**Data Science Intern** — Jul 2020 – Aug 2020, Melbourne, Australia

*Saltwater Media Solutions*

- Building an ensemble model to determine the success of a media interview.

### Junior Software Engineer
*Mimyk Medical Simulations Pvt. Ltd.*

Jul 2019 – Jan 2020
Bangalore, India

- Developing Virtual Reality (VR) and Haptic–based surgical simulators

### City Manager
*OpenIDEO Bengaluru Chapter*

Nov 2018 – Dec 2019
Bangalore, India

- Website development for a non-profit NGO in Bangalore. (ADISYAM)
- Organising and managing events for the Chapter.

### Software & Data Science Intern
*ThingsCloud Technologies Pvt. Ltd*

Jan 2019 – Mar 2019
Bangalore, India

- Development of the website using Angular.js and automating the model for the users who have no knowledge about Machine learning and its dependent features.

### Machine Learning and AI Engineer
*JetGlobo Technologies Pvt Ltd*

Jul 2018 – Sep 2018
Hyderabad, India

- An algorithm for the cab booking service was designed and deployed which was based on the arrival and departure of the International and the domestic flights.

### Software Engineer Intern
*Nucarbn*

Jul 2017 – Apr 2018
Bangalore, India

- A deep learning algorithm for detection of diabetes with the features including SSPG, blood pressure, blood sugar using Convolutional Neural Network, Long Short-term memory and SVM.
- Smart contact for the private blockchain with Solidity was deployed.

### Machine Learning Intern
*Catalan labs*

Apr 2017 – Apr 2018
Bangalore, India

- Designed and deployed an algorithm for the prediction of bitcoin values using Bayesian regression with an accuracy of 89%.

## Personal projects

### Image Classification
- Classifying Fashion MNIST data and deploying it on mlflow.
- Technologies used: Python, pandas, mlflow, keras

### Agricultural Development
- An IOT based device which detects the amount of poisonous gases released by the tractors, which depletes the quality of crops. So, in order to improve the quality of crops by detecting it and reporting it to the company renting the tractors (John Deere).
- Technologies used: Arduino, sensors (MQ135, MQ6), ThingSpeak

### Bitcoin Predictor
- A Machine Learning project based on the Bayesian regression for the prediction of bitcoin prices.
- Technologies used: Python, NumPy, SymPy, Scikit

### Chatbot
- A Retrieval-based model Chatbot by using the dialogues from ubuntu corpus.
- Technologies used: Python, Numpy, Pandas

### Diabetes Predictor
- A Machine Learning based project using Decision tree algorithm and 7 parameters to predict diabetes.
- Technologies used: Python, Numpy, Pandas

## Health Care

- A Machine Learning project to improve the health conditions of the rural areas, which collects the data of the patient and prescribes the immediate medical help to be given to the patient (this was done in particular to the pregnant women, as the maternal mortality rate is very high in India).
- Technologies used: Python, Scikit

# Publications

### Cross Audio-Visual Recognition – Lip Reading

*International Journals of Advanced Research in Computer Science and Software Engineering [ ISSN: 2277-128X (Volume-9, Issue-4)]*

Jun 2019

- Lip reading is the task of decoding text from movement of a speaker's mouth. There are two stages in the task namely the designing or learning the visual features and prediction. It learns the spatiotemporal visual features and the sequence model. The three dominant models that are being utilised to design the Lip reading is Convolution Neural Networks (CNN), LSTM's and Reinforcement learning.

### Artificial Intelligence Based Chatbot using Sequence-to-Sequence Model

*International Conference on Sustainable Advanced Computing*

Mar 2018

- The paper presents the architecture of the Chatbot using Sequence to Sequence model. The paper depicts detailed functional blocks, associated layers and software methodology adopted during the development.

### Blockchain with Artificial Intelligence: Future of Travel

*International Conference on Clean Energy and Electrical Systems ( CEES 2018 )*

Oct 2018

- An integration of artificial intelligence with blockchain. The new travel agencies are to be registered with the government before it starts functioning. The smart contracts are made between the government and the travel agencies and between the agencies and the customers to validate the Proof-Of-Activity and Proof-Of-Delivery. The digital identification which reduces the verification of the customer every time.

# Languages

**English**
*IELTS:7.5*

**Hindi**

**Kannada**

# Awards/Acheivements

### Hackathons

- Top 3 participants in SHE-HACK conducted for women by GO-JEK.
- Awarded first place in the DevHack conducted by CrowdSupply in Sept 2017.
- Top 3 teams in the "International Space Apps Challenge" 2017.
- Selected for the final round of India's one of the biggest hackathons "Smart India Hackathon" 2018.

### Open source contribution

- Major open source contribution for Italian Mars Society, Yunity.
- Have been a committed member for Women Who Code, Systers, GDG Bangalore, PyLadies from 2017.