

# Padmaja Bhagwat

National Institute of Technology Karnataka  
Girls'hostel, GH-05, Room no. 620,  
Srinivasanagar, Surathkal, INDIA  
☎ +918970849104  
✉ padmajabhagwat4@gmail.com  
📁 padmajavb.github.io

## Education

- August 2014– **B.Tech in Information Technology**, National Institute of Technology Karnataka,  
May 2018 Surathkal, CGPA – 8.36 (out of 10).  
2014 **Second year PUC**, Sanganasava Residential PU College, Bijapur,  
Percentage – 95.66.  
2012 **SSLC**, St. Joseph's English Medium School, Bijapur, Percentage – 96.16.

## Work Experience

- May 2017– **Summer Intern**, VMWARE SOFTWARE INDIA PVT LTD, Bangalore,  
July 2017 Worked on **Firewall anomaly detection using ML** that involved designing a Machine Learning model that can learn the known good practices of firewall rules.  
December **Winter Intern**, 5C NETWORKS, Bangalore,  
2016 Worked on automating the brain tumor (Glioblastomas) segmentation using MRI scans using an input cascaded Convolutional Neural Networks having two pathway architecture in order to detect both local and global features of the tumor.  
May 2016 – **Summer Intern**, UNNATI DATA LABS, Bangalore,  
July 2016 Worked on the **Algorithmic Music Generation** project, that involved developing Artificial Neural Network model to generate music using deep learning in Python. The project was aiming to generate Indian classical music based on the genre chosen by the user without infringing the copyrights.  
<https://github.com/unnati-xyz/music-generation>.

## Academic Projects

- March 2018 **Listen, Attend, and Walk: Interpreting natural language navigational instructions**, using Python,  
The encoder-decoder model along with multilevel aligner, successfully interprets the human language, which could get extremely vague and ambiguous at times, and navigates itself in the given virtual environment. **GitHub** link.  
October 2017 **VM Allocation using Weighted Interval Scheduling With Capacity Sharing**, using JAVA,  
This algorithm maximizes the total weights (or profits) of virtual machines allocation in Cloud data centers by adopting capacity sharing along with weighted interval scheduling. Final simulation was done in the **CloudSim** environment. **GitHub** link.

- February 2017 **Music Recommendation System**, using *Python, HTML, CSS, JavaScript, PHP and MySQL*,  
The system keeps track of songs rated by customers and recommends songs based on their similarity with other customers. Other features of the website include voice recognition, lyrics translation, displaying the most trending songs. **GitHub** link.
- February 2017 **Android Malware Detector**, using *Python*,  
Classifies the given android app into benign or malicious using the ID3 algorithm. **GitHub** link.
- March 2017 **PIR based intruder detection system**, using *Python*,  
The system uses a PIR motion sensor to detect the presence of a person within a certain range. Once detected, lights up LEDs, sounds an alarm and notifies the authorized user through a phone call and SMS. **GitHub** link.
- October 2016 **Heart Disease Predictor**, using *C and OpenMP*,  
The neural network model, predicts the severity of heart disease, where its training phase was parallelized using the **OpenMP API**. **GitHub** link.
- April 2016 **ChitChat - The Chat Application**, using *Python*,  
The system uses TCP sockets for the transfer of files, in order to establish a peer to peer communication **GitHub** link.

## Technical Skills

- Programming Languages    Fluent: C, JAVA, Python  
Familiar: HTML, CSS, UNIX Shell Script, MySQL, JavaScript and PHP.
- Tools and OS    GitHub, Jupyter notebook, AWS instance, Android Studio, ArgoUML, Wireshark, Cisco Packet Tracer, OpenMP, Kali Linux, Microsoft Windows and Ubuntu.

## Achievements and Awards

- 6<sup>th</sup> Feb 2018    Gave a talk at **PyCon 2018, Cleveland, USA** on Listen, attend, and walk: Interpreting natural language navigational instructions. <https://youtu.be/MJBWakE7cEo>
- 5<sup>th</sup> Aug 2017    South Asia finalist of **PATW** competition organized by **IET**.
- 15<sup>th</sup> Jul 2017    Winner of local network round of **PATW** competition organized by **IET**.
- 19<sup>th</sup> May 2017    Gave a talk at **PyCon 2017, Portland, USA** on the improved version of Algorithmic Music Generation. <https://youtu.be/Kk33YgJuDfk>
- 25<sup>th</sup> Sept 2016    Gave a talk at **PyCon India 2016** on Algorithmic Music Generation. <https://in.pycon.org/cfp/2016/proposals/algorithmic-music-generation~dBrxd/>

## Extra Curricular Activities

1. Took part in **6th Undergraduate Summer School** conducted by Computer Science and Automation department of **Indian Institute of Science**, Bangalore (4<sup>th</sup> July - 9<sup>th</sup> July 2016).
2. Took part in Google's Applied Computer Science with Android (ACSA) program.
3. Participated in a Hackathon conducted by **CohortPlus**.
4. Represented school in state level folk dance competition twice.