

# Prathik Hegde

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## EDUCATION

**University of Southern California**

Master of Science in Computer Science

LA, California

**May 2019**

**PES Institute of Technology**

Bachelor of Engineering, Computer Science, **GPA 8.99/10**

Bangalore, India

**August 2012 – May 2016**

## SKILLS / ABILITIES

**Programming:** C, Python, Java, C++,

**Operation Systems:** UNIX, Linux, Windows

**Undergrad Courses:** Data Structures, Algorithms, Applied ML, OS, Python, C, Fuzzy Logic, Social Networks

**Graduate Courses:** Introduction to AI, Analysis of Algorithms

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## EXPERIENCE

**Juniper Networks**, Bangalore, India

**July 2016 – June 2017**

**Software Engineer**

- As part of the JUONS Kernel team, developed modules related to information exchange between the kernel and PFEs through IFSTATES.
- Created a bug assignment tool to assign bugs to engineers in the team based on its priority and workload of the engineer. Tool was programmed in Python and was subsequently utilized by all Kernel teams.
- Trained a new hire on Kernel modules by explaining major features and doing code-walkthroughs.

**Juniper Networks**, Bangalore, India

**January 2016 – June 2016**

**Software Engineering Intern**

- Built POCs to understand and analyze alternate ways for a new testing framework development.
- Developed a plug-in for editor Sublime Text for auto-completion of functions from an imported module.
- Formulated and wrote an 'if-else' parser to process test case file for the new framework.

**Center for Cloud Computing and Big Data**, PESIT, India

**May 2014– August 2014**

**Summer Research Intern**

- Implemented a cloud federation solution for OpenStack with Nova Cells.
  - Project was funded by EMC2 and presented at the OpenStack Atlanta Summit 2014.
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## PROJECTS

**Simple Cloud Federation Using Availability Zones**

- Implemented a federation between two OpenStack installations, one acting as private cloud, another as public, by mapping public cloud to an availability zone on private cloud.
- Resource Availability on private cloud and other policies dictated where new VM would be spawned.

**Deep Learning for Computer Vision using JeVois Smart Vision Camera**

- Implementing a deep learning network that classifies an object using contextual data around the object.
- Using Gist descriptor of the image to summarize the context along with the image of object to train the network.
- Planning and deliberating on the appropriate dataset and the deep network architecture for the project.

**Machine Learning Techniques for Handwriting Generation**

- Developed an algorithm to generate a person's handwriting from hand-writing image.
- Image's Histogram plot and SVM classifiers were used to identify line, word and character segmentation points.
- Segmented character images were combined to form new images with person-specific writing traits. Ex. slant.

**Syntactic Error Detection in English Sentences**

- Devised and explored ways to detect grammatical errors in small length English sentences by implementing CFG rules, statistical n-gram probabilities and SVM classifier.
- Erroneous sentences with mistakes in tense and verbs were identified.