Saral Bhagat

• Portland, OR •bhagat@pdx.edu • (503)-734-0191 • http://web.pdx.edu/~bhagat

EDUCATION

Portland State University, Maseeh College of Engineering and Computer Science, Portland, OR
Master of Science in Computer Science GPA - 3.47 / 4.0 **Sep 2017 – Mar 2020**
Gujarat Technological University, India
Bachelor of Engineering in Computer Engineering GPA ~3.5/ 4.0 **Aug 2012 – Jun 2016**

Major Courses:

- Machine Learning
- Statistics
- Network Optimization
- Advanced Design and Analysis of Algorithms
- Programming Languages
- Cloud and Cluster Data Management
- Advanced Operating Systems
- Data Structures
- Software Engineering

TECHNICAL SKILLS AND CERTIFICATIONS

Programming Languages	:	**C, C ++, R, Python, JAVA**
Web Technologies	:	**HTML, JavaScript, PHP, CSS, REST APIs, Node.js, React, Bootstrap, Express**
Database	:	**MySQL, Postgres, NoSQL, Hadoop, Spark**
Cloud	:	**Amazon EC2, Google Cloud Platform, Amazon AWS**
Certifications	:	**Oracle Certified Professional (Java SE 6 Programmer), Red Hat Certified Engineer**

WORK EXPERIENCE

Portland State University, Portland, OR **Jun 2019 – Jul 2019**
Computer Science Instructor (Tech Stack – HTML5, CSS3)

- Taught introductory computer science class involving the concepts of Web development. Led lectures and educational coding activities in HTML and CSS.

Indian Space Research Organization, India **Aug 2015 – Jun 2016**
Software Engineer, Intern (Tech Stack – Java, Postgres SQL)

- **GEMS (Image Processing Software) -** Developed a fully featured Image Correction and Enhancement software (GUI) for correcting TIFF images with geometric distortions and deformations that occur with non-ideal camera angles. Allowing Image Matching by sharp feature detection this software was used to match NASA's clementine and ISRO's Chandrayaan-1 data.
- The software (GEMS) saved 720 man-hours of work by automatizing the process of sharp feature detection.

ACADEMIC PROJECTS

HBase Implementation of DBLP Database (Tech Stack **–** Pyspark, Hbase, Happybase, Python)

- Converted the DBLP graph database into NoSQL Document Oriented database, loaded data, performed data analysis and queried data to developed reports that observe the social network between authors in academia.

Stitch multiple images into a panorama (Tech Stack **–** Python, SIFT, OpenCV)

- Stitched images into a panoramic image using inverse warping algorithm**,** RANSAC algorithm and SIFT feature detection algorithm.

Machine Learning Algorithms (Tech Stack – Python, Jupyter Notebook, IPython)

- **Email spam classification:** Developed a Naïve Bayes classifier to classify spam base database.
- **Handwriting Recognition Using Neural Network:** Implemented supervised learning by training a neural network; achieved a test accuracy of 92%-98% on the classification of MNIST digits.
- **Credit card fraud detection:** Developed machine learning models to identify fraudulent card transactions.

Scheduling Simulator (Tech Stack **–** Python, Python Flask)

- Implemented First In First Out, Round Robin and the Completely Fair scheduling algorithm and analyzed the results for different workloads.