

# Jees Augustine

. ALGORITHM . DATABASE . DATA SCIENCE . DEEP LEARNING . GRAPHS . MACHINE LEARNING .

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## EDUCATION

**Ph.D. Computer Science and Engineering**  
University of Texas at Arlington, USA  
(CGPA: 4.0/4.0)

Arlington, Texas  
2014 -PRESENT

**Master in Engineering . Computer Science and Engineering**  
Birla Institute of Technology & Science, Pilani, India  
(CGPA: 8.19/10.0)

Pilani, India  
Fall 2011- Fall 2013

## PROFESSIONAL EXPERIENCE

### Cisco Systems - India

SOFTWARE ENGINEER II

- Implementation and refinement of features in **Multi-Protocol Label Switching (MPLS)** and **Fast Rerouting (FRR)** on mobile backhaul networks.

Bangalore, India  
Aug-2013 – Aug-2014

### EMC Corporation

PROJECT INTERN

- Design and development of an application, choreographing the Backup Server Install/Upgrades in **Python**.
- Devising a **pseudorandom number generator** for verifying the client-side deduplication.

Bangalore, India  
Jan-2013 – Jun-2013

### Indian Institute of Technology - Chennai

PROJECT INTERN

- Online Minimum Makespan Scheduling** with improved Buffer Size.

Chennai, India  
May-2012 – Jul-2012

### Vikram Sarabhai Space Center (VSSC)

PROJECT INTERN

- Design of information warehousing** system for launch vehicle simulations using **JSP** and **MySQL**.

Trivandrum, Kerala  
Nov-2009 – Jan-2009

## SKILLS

Data Analysis	Pandas, NumPy, SciPy
Machine Learning	SciKit-Learn
Deep Learning	Keras, TensorFlow
Visualization	Matplotlib, Tableau(beginner)
Languages	Python, C, Java, HTML, JSP
Databases	MS Access, MS SQL Server, MySQL, Oracle
Web Technologies	HTML, XML, CSS, JavaScript
Query Languages	SQL, PLSQL

## PUBLICATIONS

- Abolfazl Asudeh, Azade Nazi, **Jees Augustine**, Saravanan Thirumuruganathan, Nan Zhang, Gautam Das, Divesh Srivastava. “**Leveraging Similarity Joins for Signal Reconstruction**”. *Accepted VLDB: Very Large Databases 2018*.
- [Poster] Abolfazl Asudeh, Azade Nazi, Saravanan Thirumuruganathan, **Jees Augustine**, Sona Hasani, Nan Zhang, Gautam Das, Divesh Srivastava. “**Finding the Closest Point to a Prior in Large-Scale Sparse Binary Under-Determined Systems**”, In *iPerform 2017*.
- [Poster] Azade Nazi, **Jees Augustine**, Saravanan Thirumuruganathan, Gautam Das, Divesh Srivastava, Nan Zhang. “**Finding Top-k Source-Destination Flows in a Network**”. In *iPerform 2016*.

## WORKING PROJECTS

- AEL: **Deep Learning Models** to Predict User’s Spatial Locations Using GPS Data
- Computing **Top-K Nearest Neighbor Graph** through Crowdsourcing

## RELEVANT COURSES

Advanced Computational Models and Algorithms . Special Topics in Advanced Information Security . **Machine Learning** . **Advanced Algorithms and Complexity** . Advanced Computer Networks . Advanced Operating Systems . **Algorithm Analysis and Design** . Security in Computing . **Data Analysis and Modeling** . **Reasoning with Uncertainty** .

## CERTIFIED COURSES ONLINE - MOOC

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- Coursera **Introduction to Data Science in Python** -Link-
- Coursera **Programming for Everybody, Getting Started with Python** -Link-
- Coursera **Python Data Structures** -Link-
- Coursera **Using Python to Access the Web Data** -Link-
- Coursera **Using Databases with Python** -Link-

## ONGOING COURSES ONLINE - MOOC

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- Coursera **Deeplearning.Ai**
- Coursera **Machine Learning**
- Coursera **Neural Networks for Machine Learning**
- Udacity **Deep Learning from Google**
- edx **Machine Learning for Data Science**

## RESEARCH EXPERIENCE

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- **AT&T Research Grant, DBXLab** University of Texas at Arlington Spring 2017
- **Qatar Research Foundation Grant, DBXLab** University of Texas at Arlington Spring 2018

## PROJECTS

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1. **Face Recognition using Support Vector Machines (SVM)** UTA, Sep 2014 – Dec 2014  
**Technology** Python2.7, NumPy, SciPy  
**Dataset** AT&T Image Dataset (40 different individuals)  
**Methodology** **Principal Component Analysis** for dimensionality reduction, **SVM** for classification  
**Accuracy** 88% in Testing
2. **Image Recognition using Linear Discriminant Analysis (LDA)** UTA, Sep 2014 – Dec 2014  
**Technology** Python2.7, NumPy, SciPy  
**Dataset** AT&T Image Dataset (40 different individuals)  
**Methodology** **Principal Component Analysis** for dimensionality reduction, **LDA** for classification  
**Accuracy** 94% in Testing
3. **Choreography of Backup Server Install/Upgrade** EMC-Corporation, Bangalore: Jan 2013 – Jun 2013  
**Technology** Python2.7, Linux, EMC Avamar, MySQL  
**Dataset** Proprietary, EMC corporation  
**Methodology** **Choreograph the Software Upgrade**, Generate **Pseudo Number** from Linux to test, Validation and Sanity Check  
**Deployment** for Internal Use at EM Corporation
4. **Live Migration of Virtual Machine over a Network** BITS, Pilani, Aug 2012 – Dec 2012  
**Technology** Java, Linux, MySQL, KVM  
**Dataset** Synthetic Dataset Generated  
**Methodology** Premature Negotiation, Push-Pull Negotiation with source and destination  
**Deployment** Experiential
5. **Middleware framework on the cloud enabling Semantic Dynamic Composition** BITS, Pilani, Jan 2012 – Dec 2012  
**Technology** Java, Linux, MySQL  
**Dataset** Synthetic Dataset Generated  
**Methodology** Sematic module identification with Natural Language, compose brand-new cloud services based on requirement  
**Deployment** Experiential
6. **Distributed System Simulator** BITS, Pilani, Sep 2011 – Dec 2011  
**Technology** Java, Linux  
**Dataset** Synthetic Dataset Generated  
**Methodology** **Deadlock Detection, Deadlock Prevention**, Process Synchronization, **IPC**  
**Deployment** Experiential
7. **Design of Information Repository System for Launch Vehicle** VSSC, ISRO, India Dec 2010 - Jan 2011  
**Technology** JSP, MySQL, Apache Server  
**Dataset** Proprietary flight data ISRO  
**Methodology** **Deadlock Detection, Deadlock Prevention**, Process Synchronization, **IPC**  
**Deployment** for Internal Use at VSSC, ISRO

## TEACHING and MENTORSHIP

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- **STEM Scholarship** for Graduate Teaching Assistant at long semesters at UTA. Fall 2014 – Current
- Graduate Teaching Assistant, **Secure Programming**, UTA. Fall 2017

- Graduate Teaching Assistant, **Advanced Topics in Database Systems**, UTA. Summer 2016
- Graduate Teaching Assistant, **Computer Networks**, UTA. Fall 2016, Spring 2016
- Graduate Teaching Assistant, **Computer Networks I: Protocols and Architecture**, UTA. Fall 2014 – spring 2015
- Teaching Assistant, **Data Structure and Algorithms**, Birla Institute of Technology and Science, India. Fall 2012
- Teaching Assistant, **Computer Networks**, Birla Institute of Technology and Science, India. Fall 2011 – Spring 2012

## ACADEMIC ACHIEVEMENTS

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- **1 among the 18 qualified** for BITSAT- Higher Degree Program (Computer Science), an **All India entrance examination** for admission into Master Degree by Birla Institute of Technology and Science, Pilani (BITS-Pilani), India.
- Secured **98.88 Percentile** in Graduate Aptitude Test in Engineering (**GATE**) in 2011 (**Written by .13M Students**).
- Project Forum Member (Masters) Computer Science Association BITS – Pilani.
- Secured **1<sup>st</sup> position** for presenting the paper “Self-Defending Networks-A Smarter Way to Defend” at **XTRIUM 09 v.20**, Technical Festival by Association of Electronics and Communication Engineering, MACE, Kothamangalam.
- Secured **2<sup>nd</sup> position** for presenting the paper “Self-Defending Networks with Automatic Intrusion Detection” at **Qbit’09 v.20**, Technical Festival organized by Department of Computer Science and Engineering, MACE, Kothamangalam.