Jees **Augustine**

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

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EDUCATION

Ph.D. Computer Science and Engineering — Arlington, Texas
University of Texas at Arlington, USA — 2014 -PRESENT
(CGPA: 4.0/4.0)

Master in Engineering, Computer Science and Engineering — Pilani, India
Birla Institute of Technology & Science, Pilani, India — Fall 2011- Fall 2013
(CGPA: 8.19/10.0)

PROFESSIONAL EXPERIENCE

Cisco Systems - India — Bangalore, India
SOFTWARE ENGIEER II — Aug-2013 – Aug-2014
- Implementation and refinement of features in **Multi-Protocol Label Switching (MPLS)** and **Fast Rerouting (FRR)** on mobile backhaul networks.

EMC Corporation — Bangalore, India
PROJECT INTERN — Jan-2013 – Jun-2013
- 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.

Indian Institute of Technology - Chennai — Chennai, India
PROJECT INTERN — May-2012 – Jul-2012
- **Online Minimum Makespan Scheduling** with improved Buffer Size.

Vikram Sarabhai Space Center (VSSC) — Trivandrum, Kerala
PROJECT INTERN — Nov-2009 – Jan-2009
- **Design of information warehousing** system for launch vehicle simulations using **JSP** and **MySQL**.

SKILLS

Data Analysis	**Pandas, NumPy, SciPy**
Machine Learning	**SciKit-Learn**
Deep Learning	**Keras, Tensor Flow**
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

RELVANT 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.**

CERTFIED COURSES ONLINE - MOOC

- 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

- 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

- **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

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

- **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

- **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 **1st 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 **2nd 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.