

# Keval Morabia

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## EDUCATION

### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN (UIUC)

Urbana, IL

*Masters degree in Computer Science (GPA: 4/4)* with specialization in Artificial Intelligence

Aug 2019 - Dec 2020

- Coursework: Computer Vision, Advanced Information Retrieval, Machine Learning in NLP, Building Autonomous Vehicles

### BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE (BITS), PILANI

Hyderabad, India

*B.E. (Hons.) in Computer Science (GPA: 9.72/10)*

Aug 2015 - May 2019

## EXPERIENCE

### AMAZON WEB SERVICES (AWS)

Greater Seattle Area, WA

*Software Development Engineer Intern*

May 2020 - Aug 2020

- Deployed **Java** APIs to **AWS** cloud for providing preview of tasks to be performed by technicians in Amazon data centers
- Parsed complex BPMN Workflows extracted from **Amazon Dynamo DB** to identify expected order of task execution

### UIUC - FORWARD DATA LAB

Urbana, IL

*Research Assistant with Prof. Kevin Chang*

Aug 2019 - Mar 2020

- Implemented a novel **Visual Attention-based Model** in **PyTorch** for webpage Info. Extraction (IE) [Submitting to **CVPR 2021**]
- Exploited contextual information using visual features of ordered web elements extracted using **Resnet18**
- Created the **largest public labeled dataset of 7.7k webpage images** for Product IE
- Achieved an Accuracy of **94.5%** for product Price extraction (**11%** above **Fast-RCNN**) and interpreted Attention Visualizations

### MICROSOFT RESEARCH

Bengaluru, India

*Research Intern*

Jan 2019 - Jul 2019

- Implemented **Graph RNNs** in **TensorFlow** to **Learn Embeddings** for **300k** entities in a heterogeneous graph
- Collaborated with a **team of 10** to design a novel Deep Neural Net architecture for **recommending messages** in MSTeams
- Outperformed **Graph Convolutional Networks** on **5** benchmark datasets for rating prediction and ranking tasks

### BITS PILANI

Hyderabad, India

*Research Assistant*

Jan 2018 - Dec 2018

- Analyzed **Twitter Stream** for **Event Detection** and achieved a precision of **88.1%** (absolute improvement of **8%**)
- Segmented tweets and hash-tags; applied Jarvis-Patrick clustering; and summarized newsworthy events

### ARCESIUM INDIA PVT. LTD.

Hyderabad, India

*Software Engineer Intern*

May 2018 - Jul 2018

- Enhanced **Expense Management System** by adding back-end services in **Java** to modify in **MS SQL Server** database
- Automated comparison of budgeted inputs with actual expenses on a UI implemented in **JavaScript**

## PUBLICATIONS

- Morabia, K., Bhanu Murthy, N. L., Malapati, A., & Samant, S. (2019, June). **SEDTWik: Segmentation-based Event Detection from Tweets using Wikipedia**. In Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics (**NAACL**): Student Research Workshop (pp. 77-85) [Paper] [Code]

## PROJECT HIGHLIGHTS

*Attention-based Joint Detection of Object and Semantic Part [arXiv:2007.02419] [Code]*

Feb 2020 - May 2020

- Implemented a novel model for simultaneous Object and Part detection by combining 2 **Faster-RCNN** models in **PyTorch**
- Applied **Attention-based feature fusion** to learn enhanced representation for Object and Part proposals
- Improved **mean Average Precision** for Objects and their Parts on **PASCAL-Part Dataset**

## SKILLS

- **Programming:** Python, Java, C, LaTeX, SQL, HTML, CSS, JavaScript
- **Other Technologies:** PyTorch, TensorFlow, Scikit-learn, GIT, JUnit, Mockito, JavaFX
- **AWS Services:** EC2, Lambda, DynamoDB, S3, API Gateway, IAM, Cloudwatch, CloudFormation

## LEADERSHIP AND HONORS

- Awarded **Merit Scholarship (Top 1%** out of **700** students at BITS Pilani, Hyderabad)
- Organized cultural dance events as **President** of **150**-membered Gujarati Association - BITS Pilani, Hyderabad; attended by over **1000** students; raised **INR 30k** fund

Aug 2015 - May 2019

Jul 2017 - May 2018