# Keval Morabia

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## EDUCATION

**University of Illinois at Urbana-Champaign**    Urbana, IL
*Masters degree in Computer Science (GPA: 4/4)* with specialization in Artificial Intelligence    Aug '19 - Dec '20
- **Coursework:** Computer Vision, Adv. Information Retrieval, Machine Learning in NLP, Autonomous Vehicles, UI Design
- **Teaching Experience:** Natural Language Processing, Discrete Structures

**Birla Institute of Technology and Science (BITS), Pilani**    Hyderabad, India
*Bachelor of Engineering (Hons.) in Computer Science (GPA: 9.72/10)*    Aug '15 - May '19

## EXPERIENCE

**Amazon Web Services (AWS)**    Greater Seattle Area, WA
*Software Development Engineer Intern*    May '20 - Aug '20
- Deployed **Java APIs** to **AWS** cloud for providing preview of tasks to be performed by technicians in Amazon data centers
- Analyzed complex BPMN Workflows extracted from **Amazon Dynamo DB** to identify expected order of task execution
- Tested code with Unit, Integration and Load testing using **JUnit**, **Mockito**, and **TestNG**

**University of Illinois at Urbana-Champaign**    Urbana, IL
*Research Assistant with Prof. Kevin Chang*    Aug '19 - May '20
- Experimented a **Visual Attention-based** Model in **PyTorch** for novel Webpage Object Detection formulation
- Utilized contextual information using visual features of ordered web elements extracted using **Resnet18**
- Created largest public labeled dataset of 7.7k product webpage screenshots
- Achieved **95% accuracy** for product Price detection (8.5% above Fast R-CNN) and interpreted Attention Visualizations

**Microsoft Research**    Bengaluru, India
*Research Intern*    Jan '19 - Jul '19
- 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 '18 - Dec '18
- 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; summarized newsworthy events

**Arcesium India Pvt. Ltd.**    Hyderabad, India
*Software Engineer Intern*    May '18 - Jul '18
- Enhanced Expense Management System by adding **Java APIs** to modify in **MS SQL Server** database
- Automated comparison of budgeted inputs with actual expenses on a UI created 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

*Building an Autonomous Vehicle*    Sep '20 - Nov '20
- Collaborated in a **team of 6** to control a Polaris GEM e2 Autonomous Vehicle containing a LiDAR, Radar, and camera
- Programmed WASD keyboard keys to accelerate and steer vehicle using a PID controller and ROS Python commands
- Deployed pre-trained **YOLOv3** to stop vehicle on detecting a pedestrian

*Attention-based Joint Detection of Object and Semantic Part [arXiv:2007.02419] [Code]*    Feb '20 - May '20
- Implemented a **PyTorch** model for simultaneous Object and Part detection by combining 2 **Faster-RCNN** models
- Applied a novel **Attention-based feature fusion** to learn enhanced representation for Object and Part proposals
- Improved mean Average Precision for Objects and Parts on PASCAL-Part dataset

## SKILLS

- **Programming:** Python, Java, C, C++, LaTex, SQL, HTML, CSS, JavaScript
- **Other Technologies:** PyTorch, TensorFlow, AWS, Scikit-learn, GIT, Flutter, Android Studio, JUnit, Mockito

## LEADERSHIP AND HONORS

- Awarded **Merit Scholarship** (**Top 1%** out of 700 students at BITS Pilani, Hyderabad)    Aug '15 - May '19
- Organized cultural dance events as **President** of 150-membered Gujarati Association - BITS Pilani,    Jul '17 - May '18
Hyderabad; attended by over 1000 students; raised INR 30k fund