

# SHAUNAK HALBE

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## EDUCATION

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**College of Engineering Pune (COEP)**

Senior Year Undergraduate

Department of Computer Engineering

Link to Transcript : [Click Here](#)

*July 2018 - Present*

**GPA: 9.8 / 10**

**Institute Rank: 1 / 700**

## RELEVANT COURSES

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Data Structures & Algorithms

Deep Learning

Operating Systems

Natural Language Processing

Linear Algebra & Multivariate Calculus

Data Science

Artificial Intelligence

Computer Networking

## TECHNICAL SKILLS

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**Programming Languages**

**Software & Tools**

**Platforms & Toolkits**

**Deep Learning Frameworks**

**Research Interests**

C/C++, Python, SQL, Matlab

HTML5, CSS, Javascript, React.js

Jupyter Notebooks, Google CoLab, Git, Bash Scripting,

Linux Commands, LaTeX

PyTorch, Keras, Tensorflow

**Computer Vision , Natural Language Processing,**

**Deep Learning, Robust ML**

## PUBLICATIONS

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**1. Reason & Act : A Modular Approach to Explanation Driven Agents for Vision and Language Navigation** [\[video\]](#)

*Shaunak Halbe, Ingrid Navarro, and Jean Oh*

· 2021 Robotics Institute Summer Scholars Working Papers Journal, **Carnegie Mellon University**

**2. Exploring Weaknesses of VQA Models through Attribution Driven Insights** [\[video\]](#)

*Shaunak Halbe*

· Second Grand-Challenge and Workshop on Multimodal Language, **ACL 2020**

· Preliminary Version : Visual Question Answering & Dialog Workshop, **CVPR 2020**

## RESEARCH EXPERIENCE

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**University of Southern California**

*Research Intern*

Los Angeles, CA

*June 2021 - Present*

· Worked under the guidance of [Dr. Ahmad Beirami](#) (Facebook AI) & [Prof. Meisam Razaviyayn](#) on promoting invariance in Machine Learning systems across different domains through Data Augmentation.

· Extended the application of an invariant feature learning method to several tasks spanning visual classification, domain generalization and multimodal learning

**Carnegie Mellon University***Summer Research Scholar*

Pittsburgh, PA

*May 2021 - Aug 2021*

- Worked under the guidance of [Dr. Jean Oh](#) on Vision and Language Navigation
- Contributed to the design of a modular embodied agent in continuous navigable environments

**Bennett University***Summer Research Internship*

Greater Noida, India

*April 2020 - July 2020*

- Studied the effects of Adversarial Attacks on Deep Neural Networks
- Read and implemented several research papers on Adversarial Attacks for Computer Vision tasks.

**SILP Lab, IIIT Allahabad***Winter Research Internship*

Allahabad, India

*Dec 2019 - Jan 2020*

- Conducted Research under the supervision of Dr. Uma Shanker Tiwary in the domain of Computer Vision, specifically Object Detection and Instance Segmentation.

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**ACADEMIC ACHIEVEMENTS**

Institute Academic Topper, College of Engineering Pune 19-20 and 20-21

COEP's Alumni Association Academic Award in 2020 and 2021

Mitacs Globalink Research Internship 2021 (declined)

IUSSTF Viterbi Research Scholarship 2021

CMU Robotics Institute Summer Scholarship 2021

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**PROJECTS**

3. Financial Portfolio Manager : A complete investment portfolio system powered by Deep Learning  
[Github Link](#)
2. Adversarially Robust Capsule Networks for Image Classification  
[Github Link](#)
3. Image Captioning and translation into Indian Languages to assist the visually impaired  
[Github Link](#)
4. Instance Segmentation using Mask RCNN on Pedestrian Detection Dataset in PyTorch.  
[Github Link](#)

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**LEADERSHIP****COEP's Data Science and Artificial Intelligence Club***Research Secretary*

March 2019 - Present

*College of Engineering Pune*

- Lead a team of 20 undergraduate students to conduct research projects in Machine Learning.