

# Pradyot Prakash

[pradyot@cs.wisc.edu](mailto:pradyot@cs.wisc.edu) | +1 608-698-8670 | Madison, WI, USA | [linkedin.com/in/pradyotprakash](https://www.linkedin.com/in/pradyotprakash)

## EDUCATION

<b>University of Wisconsin-Madison (UW-Madison), Madison, WI, USA</b>	<i>Sep 2017 - Ongoing</i>
MS in Computer Science	4.0/4.0
<b>Indian Institute of Technology Bombay (IIT Bombay), Mumbai, India</b>	<i>Jul 2013 - May 2017</i>
B.Tech. with Honors in Computer Science and Engineering with Minor in Statistics	9.26/10

## PROFESSIONAL EXPERIENCE

<b>Facebook, Menlo Park, CA, USA</b>	<i>Summer 2018</i>
Software Engineering Intern, Ads Ranking	
<ul style="list-style-type: none"><li>Worked on the <b>prediction models</b> used within <b>Ads Product Ranking</b> to improve the product placement on the feed</li><li>One of the models I worked on is <b>currently in production and serving global ads traffic</b></li></ul>	
<b>Adobe Research Labs, Bengaluru, India</b>	<i>Summer 2016</i>
Research Intern	
<ul style="list-style-type: none"><li>Built a model for <b>predicting Brands' Personality</b> along 5 personality dimensions using articles published by companies</li><li>Outperformed state-of-the-art accuracies by <b>19%</b> in the best case and <b>patent</b> (retrieve <a href="#">here</a>) approved and filed by Adobe</li></ul>	
<b>IST Austria, Klosterneuburg, Austria</b>	<i>Summer 2015</i>
Research Intern	
<ul style="list-style-type: none"><li>Researched Hybrid Systems and hybridizing a single-state to a multi-state system governed by time-based splitting rules</li><li><b>Paper published</b> in HSCC 2016 (retrieve <a href="#">here</a>)</li></ul>	

## RECENT KEY PROJECTS

<b>Breaking Robust Adversarial Classification (retrieve <a href="#">here</a>)</b>	<i>Spring 2018</i>
Under Prof. Dimitris Papailiopoulos, UW-Madison	
<ul style="list-style-type: none"><li>Robust Manifold Defense is state-of-the-art adversarial classification algorithm which works by projecting on the space of GANs</li><li>Developed the <b>first algorithm</b> to break the classifier &amp; <b>brought down the classification accuracy by 35%</b> (more work in progress)</li></ul>	
<b>Fuzzy Iterative Machine Teaching (retrieve <a href="#">here</a>)</b>	<i>Spring 2018</i>
Under Prof. Jerry Zhu, UW-Madison	
<ul style="list-style-type: none"><li>Studied the inverse problem of ML--Machine Teaching--where the aim is to <b>learn</b> a target parameter vector in minimum steps</li><li><b>Derived robust bounds</b> for the minimum steps needed to converge under <b>noisy and missing data</b> settings for different losses</li></ul>	
<b>Autoencoders &amp; Generative Adversarial Modeling</b>	<i>Spring 2018</i>
Under Prof. Rebecca Willett, UW-Madison	
<ul style="list-style-type: none"><li><b>Implemented</b> autoencoders and generative adversarial nets for MRI image denoising</li><li>Worked on a unique approach to <b>invert a neural network</b> using Neumann series in operator space</li></ul>	
<b>GPU profiling of Deep learning frameworks (retrieve <a href="#">here</a>)</b>	<i>Fall 2017</i>
Under Prof. Aditya Akella, UW-Madison	
<ul style="list-style-type: none"><li>Analyzed deep learning libraries using their intermediate representations (with ONNX) and profiled their GPU performances</li></ul>	
<b>Effect of Segmentation and Encoding on Machine Translation</b>	<i>2016 - 2017</i>
Under Prof. Pushpak Bhattacharyya, IIT Bombay	
<ul style="list-style-type: none"><li><b>Improved transliteration and translation</b> with use of pivot-based modeling, byte-pair encoding and orthographic syllabification</li><li><b>Paper published</b> at IJCNLP 2017 (retrieve <a href="#">here</a>)</li></ul>	
<b>Statistical Shape Analysis of Images (retrieve <a href="#">here</a> and <a href="#">here</a>)</b>	<i>2016 - 2017</i>
Under Prof. Suyash Awate, IIT Bombay	
<ul style="list-style-type: none"><li><b>Created a similarity measure</b> between images and their contours alongside a novel objective function</li><li>Used that to <b>segment MRI images</b> (with a shape prior) by performing Riemannian PCA on high dimensional unit spheres</li></ul>	

## TECHNICAL SKILLS

- Coding:** C++, Python, Java, C, Prolog, SQL, MATLAB, R, Bash, LaTeX
- Python packages:** Tensorflow, pandas, NumPy, scikit-learn, matplotlib

## OTHER ACHIEVEMENTS

- Department Academic Mentorship Program Head** for CS and **Institute Academic Mentor**, IIT Bombay (2016 - 2017)
- Lead the Web and Coding Club** of IIT Bombay (2015 - 2016)
- Secured **All India Rank 55** in JEE Advanced out of 150000 and **All India Rank 16** in JEE Main out of 1.5 million students (2013)
- Won several awards in Hackathons (one organized by Microsoft) and Logic Championships organized at IIT Bombay (2014 - 2016)
- Recipient of the Young Scientist Incentive Programme (KVPY) National Fellowship (2012)