

# Nirant Kasliwal

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## SKILLS

### PROGRAMMING

Comfortable:

Python Ecosystem

Learner:

PyTorch • fastAI • spaCy • Numpy •

Flask • Scikit Learn

Familiar:

TensorFlow • R • C • C++ • zsh/bash  
shell •  $\LaTeX$

## EDUCATION &

## LEARNING

### BITS PILANI

M.Sc. (TECH.) INFORMATION  
SYSTEMS

2012 - 2016 | Pilani, Rajasthan, India

Relevant Coursework: • Machine  
Learning • Pattern Recognition • Data  
Mining

### FELLOWSHIP

INTERNATIONAL FELLOW AT FASTAI  
PART 2

Spring 2018

International Fellowship to actively  
participate in the live offering of fastAI's  
Part 2

## PUBLICATION

PUBLISHED IN MACHINE  
INTELLIGENCE AND SIGNAL  
PROCESSING BY SPRINGER

Improved the accuracy of character  
recognition in natural scene images  
on the standard Chars74k dataset

- Proposed a classification technique achieving 72% accuracy (state-of-the-art for chosen dataset in 2013) for classifying characters
- Built a basic image processing operations and ensemble machine learning pipeline

## EXPERIENCE

### SOROCO | MACHINE LEARNING ENGINEER

October 2017 – Present | Bengaluru

- Text Classification toolkit: Built & deployed fastText based toolkit for rapid prototyping across multiple deployments
- OCR: Contributed to a configurable data synthesizer; implemented 1-cycle training policy to speed up network convergence by 10-50%; improved U-net, DenseNet, ResNet variants; ownership of the product shipping suite

### SAMSUNG RESEARCH & DEVELOPMENT | SOFTWARE ENGINEER (RESEARCH)

August 2016 – September 2017 | Bengaluru

- Prototyped algorithms using R which leverage and assess driver behaviour with reference to safety, deployed in C
- Sub-components: Event detection and classification algorithms running on Internet enabled IoT device inside car

## OUTSIDE WORK

### ONGOING: NLP 102 IN PYTHON

SERIES OF 5-10 JUPYTER NOTEBOOKS FOR TEACHING

- Written with code examples and programmer-first mindset here
- Exploring several text processing tools such as spaCy, textacy, gensim, and PyTorch
- Key ideas: String matching for spell check, vectorization for similarity, linguistics 101, ensemble modeling, deep learning for text classification

### ONGOING: AWESOME NLP

MAINTAINER AND LEAD CONTRIBUTOR

- Featured in Official Github Machine Learning Collection **Awesome-NLP** is a curated list of Natural Language Processing Resources
- 50+ contributors, 6k+ stars, 1k+ forks

### HINDI2VEC

STATE OF THE ART LANGUAGE MODELING + NEW DATASETS FOR HINDI

- Achieved State of the Art Perplexity 46.81 for Hindi using the AWD-LSTM model from Smerity et al
- Released: Cleaned BBC Hindi data of 4335 documents for text classification and text summarization.
- Released: Pretrained Language Models that you can use in your classification for transfer learning

### HACKATHON WIN: QUERY GENERATION

FIND RECENT & RELEVANT NEWS AGAINST MIDDLE SCHOOL TEXTBOOK CONTENT

- Won** the Best use of IBM Watson API (for querying news database) at the Global Opened.ai Hackathon 2017 | Results link
- Query generation using a sequentially mixed content's style elements, and noun phrases