Nishant Gupta

CSE, IIT Kanpur

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Education

B. Tech, CPI - 9.4/10	May 2017
CSE, IIT Kanpur	
HSCE (+2), 93.6%	April 2013
Shivpuri Public School	
AISSCE, 9.6/10	April 2011
Tara Sadan School	

Awards and Achievements

- JEE 2013 - AIR 248 out of 0.15 Million shortlists(1.3 million total)
- Academic Excellence Award (IITK)
- KVPY Scholar
- Qualified Regional mathematical Olympiad

Tool-Kit

Languages
Python, C/C++, Haskell, Agda, R, Bash, Javascript, Scala, Perl, x86 Assembly

Frameworks/Libraries
django, OpenCV, Parsec, data.table, dplyr, gglot, cabal, Angular, spark

Operating Systems
Linux(Gentoo, ArchLinux, NixOS)

Others
Emacs, Vim, Git, svn, ElasticSearch, LaTeX, css/scss, SQL, HTML, nix

Relevant Courses

Computer Networks, Machine Learning, Compiler Design, Functional Programming, Databases, Programming Languages, Software Architecture, Operating Systems,

Extra Curricular

- Sentiment Analysis of Social Media, Aug'14
  Won 1st prize in Web-Dev, a webapp development competition in Takneek'14.
- Secretary,
  Programming Club 2014-2015

Professional Experience

Goldman Sachs

Intern, Bangalore — May '16-July'16(10 weeks)

- Job Failure analytics
  - Improvised Job Failure prediction model and automated the crucial task of structured analytics.
  - Proposed and tested root cause detection model which leverages micro and macro failure patterns to detect probable failure causes and sends recommendation to concerned teams.
- ETA and SLA Breach prediction model
  - Transformed ETA and SLA prediction model to account for more complex dependencies.
  - Designed and partially implemented a dynamic model which
    - Can dynamically incorporate Job failure model to alter the prediction.
    - Changes prediction dynamically in reaction to various jobs and telemetries.
    - In manual testing, exhibited twice the recall and a slight increase in precision
- Rewrote the entire data ingestion pipeline for both models which now accounts for 90 percent of jobs compared to 60 percent in earlier pipeline and with 40 percent more efficiency.

Altisource Business Solutions

Intern, Bangalore — May '15-July'15(8 weeks)

- Worked on the projects Actor Equivalence and Identity Stitching and Event Data Clustering for the company's consumer analytics product 'Pointilist'
- Designed an algorithm for solving the actor equivalence problem (Established a relation between actors and streaming events) for single Multiple platforms.
- Built a generic framework that takes varying Consumer data from different tenants and Processes, normalizes and Clusters it to derive meaningful inferences.

Selected Projects

Hscraper: A Haskell library to scrape and crawl webpages.
- ⌘Nishant9/Hscraper, hackage: Hscraper(Current maintainer)

- Developed an HTML Parser and a basic query language parser with support for contiguous filtering with optional attribute matching.
- HTML Parser parses correct HTML by itself and has tidyhtml bindings to correct malformed html.
- Includes a Network module that is a wrapper around http-conduit to allow for bulk requests with varying parameters and responses.

Detection and Classification in Video Surveillance feed
- Mentor: Prof. Harish Karnick — Jan'16-Apr'16

- Achieved greater than 95 percent accuracy and precision using Recurrent Convolutional neural networks desribed in Faster R-CNN paper published in NIPS 2015
- Also achieved greater than 85 percent precision and recall using tradional approaches for image processing and feature extraction such as Mixture Of Gaussians(MoG), Non-maximum Suppression(NMS), HSV, HoG(Histogram of Gaussians), SIFT.

Other Projects

• ScalaComplier ⌘Nishant9/scalaCompiler	Scala compiler written in Python, implements dynamic scoping, type checking and basic type inference.
• CodeCloud ⌘Nishant9/ccloud	Code management website primarily for Competitve programming; uses django, bootstrap3 and sqlite
• Operating Systems ⌘Nishant9/CS330*	System calls, Signal handling, process scheduling and synchronization primitive for NachOS
• Web Platform	Various features for a academic networking platform
• Image Triangulation	Image filter that renders image using only triangles
• News Map	Webapp that scrapes websites for news, parses news for location and plots it on a map