Nishant Gupta

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Education

B. Tech, May 2017*
CSE, IIT Kanpur   9.4/10

HSCE (+2), April 2013
Shivpuri Public School   93.6%

AISSCE, April 2011
Tara Sadan School   9.6/10

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, elisp

Relevant Courses

Computer Networks(#)
Software Engineering(#)
Data Structures and Algorithms(A⋆)
Operating Systems(A⋆)
Machine Learning(A)
Compiler Design(A)
Databases(A)
Functional Programming(A)
Programming Languages(#)
Theory of Computation(A⋆)
Algorithms II (A),   (#) - Ongoing

Extra Curricular

- Sentiment Analysis of Social Media,   Jul'14-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 is robust to intermediate failures, incorporates telemetries to account for load and exhibited twice the recall with 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 accuracy 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 to x86 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 with bootstrap3 and sqlite for database.

- Operating Systems
  ⊛Nishant9/CS330*
  Implemented core System calls, Signal handling, process scheduling and synchronization primitives for NachOS

- Web Platform
  Various features and Android app for a social networking platform

- Image Triangulation
  Image filter that renders image using only triangles

- News Map
  Webapp that scrapes news websites, parses news for location and plots it on a map