

# Prashant Jalan

## Web Experience

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912 Beach Park Blvd  
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## Interests

Artificial Intelligence  
Machine Learning  
Big Data  
Parallel Computing

## Courses

Data Structure  
Algorithms  
Operating Systems  
Compiler Design  
Natural Language  
Computer Vision  
Computer Networks  
Database Design  
Game Theory  
Social Media Analytics

## Skills

**Lang:** C, Python,  
C++, Java  
**AI:** Caffe, OpenCV,  
Weka, NLTK  
**Data:** R, HDFS,  
Hadoop, Spark  
**Sys:** Assembly, Lex,  
Verilog, Yacc  
**Parallel:** OpenMP,  
CUDA C++  
**Dev:** Android, Nginx,  
Django, Node.js,  
Redis, PL/SQL,  
SQL, MondoDB  
Docker, Celery

- 09/15 - Now **Software Engineer, Oracle** [Redwood Shores, California](#)  
Design and development of algorithms, solutions and analysis schemes for the order processing backend platform at Oracle Public Cloud; along with handling live customers, production issues and data migration from time to time.
- 05/15 - 08/15 **Student Developer, Google** [Google Summer of Code](#)  
Conceptualized and implemented an open source 'Distributed Order Processing System' to distribute jobs among various worker nodes around the world.
- 05/15 - 08/15 **Visiting Research Scholar** [University of Heidelberg, Germany](#)  
Explored and computed multi-dimensional Finite Time Lyapunov Exponent ridges in space for particles with an initial mass and velocity on GPU.
- 05/14 - 08/14 **Research Intern, Directi** [Mumbai, India](#)  
Modelled and devised a real time 'Anomaly Detection Engine' to recognize and report anomalies or outliers for continuously generated advert production data.
- 05/13 - 08/13 **Robotics Engineering Intern, Systemantics** [Bangalore, India](#)  
Researched and developed an Android application from scratch to track a user's attention and regulate access to the locomotive controls of a robotic arm.

## Publications

- Identifying Hierarchical Structures in Sequences on GPU** [IEEE ISPA '15](#)  
Invented Pequitur - a parallel algorithm to compress and infer hierarchical structure from a sequence. Achieved 3x speedup while having similar compression ratio on GPU (using CUDA).
- TraffTrend-Real Time Traffic Updates & Trends using Social Media Analytics** [ACM CoDS '15](#)  
Analyzed news, tweets & FB posts to show real time traffic updates & trends with 82.3% accuracy.
- Syllables as Linguistic Units?** [ICON '14](#)  
Established that unsupervised syllabic approach outperforms orthographic word model by identifying nouns (with semantic context) in a language with no prior knowledge or word boundary info.
- Autonomous Rubik's Cube Solver Using Image Processing** [IJERT '13](#)  
Engineered and fabricated an autonomous 3x3 Rubik's cube solver to detect, scan & solve a cube.

## Education

- 07/11 - 05/15 **Bachelor's in Computer Science** [Indian Institute of Technology Kanpur, India](#)  
**Minor in Industrial Management & Engineering**  
*Graduated with Distinction. CGPA: 3.5/4.0*  
*Awarded Academic Excellence award for exceptional academic performance.*  
*A\* grade in four courses and two 'Best Course Project' awards.*  
*Secured 176 rank (top 0.03%) in IIT-JEE entrance examination.*

## Achievements

- Selected for the 5th South Asia Workshop '15 at the School of Computing, N.U.S., Singapore.
- Presented 'TraffTrend' software in the XRCI Open '15, organized by Xerox Research Labs.
- Invited for the workshop on Data & Text Analytics (DATA '14) organized by S.A.U., Delhi.
- Secured 2nd position among 400 teams in IHPC '14 (parallel programming competition).
- Winners among 10 teams all over India in National Technical Challenge, IBM I-CARE '13.
- First in Microsoft code.fun.do '13, a 24 hour hackathon organized at IIT Kanpur.