

TUSHAR MAKKAR

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Education	Bachelor of Technology, Computer Engineering May 2015 National Institute of Technology, Surathkal, Karnataka, India CGPA : 9.36/10.0 , Department Rank: 4/107
	All India Senior Secondary School Examination (C.B.S.E) July 2011 P.K.R. Jain Sr. Sec. Public School, Ambala, Haryana, India Percentage Secured : 95.6% , District Rank: 1
	All India Secondary School Examination (C.B.S.E) July 2009 P.K.R. Jain Sr. Sec. Public School, Ambala, Haryana, India Percentage Secured : 98% , District Rank: 1
Experience	Senior Software Engineer (Data Science), Rivigo March 2017-Present <ul style="list-style-type: none">• <i>Pricing Engine</i>: It enables Rivigo to present best route price for transporters and supply side to ensure better return load efficiencies and more business for fleet owners/brokers using machine learning models. <i>Patent</i> pending for the same.• <i>Demand Recommendation Engine</i>: It recommends users on the basis of their business potential and suggests serviceable load requests to those users.• <i>Rating Engine</i>: It provides rating for users using 300+ data points, which are extracted on the basis of app usage, phone usage and platform business performance data.
	Software Development Engineer - 2, CodeNation June 2015-March 2017 <ul style="list-style-type: none">• <i>Library Suggestion Engine</i>: It analyzes code and yields opportunities where a developer could have used an external library to make codebase more secure, simpler and easy to comprehend.• Underwent through Trilogy University (TU'15).
	Software Engineering Intern/Researcher, Google May 2014-July 2014 <ul style="list-style-type: none">• <i>Word Sense Disambiguation</i>: Designed the algorithm for finding context of a word using Cooccurrence based classifier and WordNet.• Worked in Ray Kurzweil's Machine Intelligence Group.
	Protocol Designer and ML Developer (Founding Engineer), Trestor Jan 2014-Oct 2015 <ul style="list-style-type: none">• <i>Trest</i>: Developed and designed a new P2P cryptocurrency. Implemented network layer protocols, consensus algorithm and biometric authentication system.
	Software Engineering Intern/Researcher, Algorithmic Insight May 2013-July 2013 <ul style="list-style-type: none">• <i>Least Cost Fulfillment Algorithm</i>: Implemented and designed the algorithm for systemizing the order fulfillment process of The Supplies Group using Genetic algorithm based approach.
Projects	Voluptuous April 2016 <ul style="list-style-type: none">• Voluptuous, despite the name, is a Python data validation library. It is primarily intended for validating data coming into Python as JSON, YAML, etc.• Part of 2-member core Voluptuous open-source development team. It has 1300+ github stars.
Patents	Library suggestion engine USPTO Library suggestion engine analyses code and yield library substitution opportunities using Machine Learning and NLP techniques.
Publications	Context aware searching of components in large repositories IEEE Proposed a new approach to locate software components from large component online open source repositories faster encompassing the techniques like context-aware browsing, Hidden Markov Models based ranking and semantic tagging.
	Dirichlet Based Collaborative Intrusion Detection Systems Springer Proposed a new approach for making Intrusion Detection System more robust using a unique mix of Dirichlet Distribution based collaborative trust model and Nash-Equilibrium.

Awards

Competitive Programming

- Ranked **3rd** among Indian teams in [IEEE Xtreme-7.0](#).
- **All World Rank 15** in [Instruo-2013](#) held at Codechef.
- Solved 300+ problems in Spoj. Handle : [tusharmakkar08](#).
- Qualified for both [ACM ICPC Amritapuri regionals](#) and [ACM ICPC Kharagpur regionals](#).

Haryana Pratibha Samman Award

- Recieved Haryana Pratibha Samman Award from Chief Minister of Haryana for securing **AIR - 3** in High School Examination.

Performance in Olympiads/Hackathons/Competition

- Winner of Hackathon [Code.Fun.Do](#) organised by [Microsoft](#).
- **Top - 10** worldwide in [IBM Smarter planet challenge](#).
- **AIR - 1** in Holy Faith's National Talent Search Exam.
- **AIR - 21** in [National Science Olympiad](#).

IIT JEE and AIEEE

- Amongst the Top-1% in IIT JEE 2011 and Top-0.3% in AIEEE 2011.

Others

- *Convenor of [Web Enthusiasts Club](#)*, an elite group of Computer Enthusiasts at NITK.
- *Microsoft Student Partner and Joint Head of NITK Codechef Campus Chapter*.
- *Executive Member NITK IEEE Student Branch and Amateur Astronomers Club (previously SGC)*.
- *Joint Convenor of Computer Committee in [Engineer 2014](#)*, the technical fest of NITK.
- *Teaching Volunteer at [Teach For India](#), [Make a Difference](#) and [Guru Nanak Sewa Sansthan](#)*.