

Monal Narasimhamurthy

CONTACT INFORMATION	Department of Computer Science 1111 Engineering Dr, Boulder, CO 80309, USA	<i>Email:</i> monal.narasimhamurthy@colorado.edu <i>Website:</i> http://monal.github.io/
RESEARCH INTERESTS	Programming languages, formal verification, logic systems and incremental computation.	
EDUCATION	University of Colorado Boulder , Boulder, Colorado, USA	
	Ph.D. Student, Computer Science, since Fall 2016	GPA - 3.97/4
	• Advisor: Prof. Matthew A. Hammer	
	M.S., Computer Science, May, 2017	
	Birla Institute of Technology and Science, Pilani , Goa, India	
	B.E.(Hons.), Computer Science, August, 2014	GPA - 7.44/10
COURSEWORK	Fundamental Concepts of Programming Languages Advanced techniques for incremental computation Machine Learning Geospatial Data Analysis User-Centered Design	Design and Analysis of Algorithms Theory of Computation Big Data Architecture Database Systems Independent study
PROFESSIONAL EXPERIENCE	Microsoft Research Lab , Bangalore, India	
	<i>Research intern, advised by Aseem Rastogi</i>	June 2017 - Jan 2018
	Implementing a separation logic library for F*, a verification oriented language.	
	Amazon , Seattle, Washington, USA	
	<i>SDE Intern</i>	May 2016 - Aug 2016
	Built a serverless architecture framework for internal roadmap and sprint planning.	
	DirectI , Mumbai, India	
	<i>Developer Operations</i>	July 2014 - July 2015
	Developed automation tools and deployed infrastructure for contextual web advertisement platforms.	
	Apigee , Bangalore, India	
	<i>Software Developer Intern</i>	Jan 2014 - June 2014
	Worked with the Diagnostics team to reduce the customer support ticket resolution time. Built a cloud infrastructure monitoring tool for the DevOps team and contributed to the testing framework.	
RESEARCH	CU Programming Languages and Verification Lab , Boulder, Colorado, USA	
	<i>Research Assistant</i>	since Aug 2016
	Working on extending Adapton, a general-purpose language-based abstraction for incremental computations.	
DRAFTS	Matthew A. Hammer, Joshua Dunfield, Dimitrios J. Economou and Monal Narasimhamurthy. Refinement types for precisely named cache locations. arXiv:1610.00097 [cs.PL].	

TEACHING	<p><i>Teaching Assistant</i> Jan 2016 - May 2016</p> <p>Conducted recitations and office hours to help students understand tools and practices for software development with a strong focus on best practices used in industry and professional development.</p> <ul style="list-style-type: none"> • CSCI 3308 Software Development Tools and Methods, Spring 2016
RELATED COURSE PROJECTS	<p><i>Soccer tweet analysis</i> <i>Big Data Architecture, Spring 2017</i></p> <p>Detected interesting patterns in the usage of soccer-related hastags on Twitter.</p> <p><i>Functional graph library</i> <i>Fundamental Concepts of Programming Languages, Fall 2016</i></p> <p>Implemented Martin Erwig's functional graph library in OCaml.</p> <p><i>Mapping the northern lights</i> <i>Geospatial Data Analysis, Spring 2016</i></p> <p>Used machine learning techniques to predict the intensity of Aurora Borealis, earth's geomagnetic storms.</p> <p><i>Betrayals in Diplomacy</i> <i>Machine Learning, Fall 2015</i></p> <p>Predicted player betrayals in the online board game of Diplomacy.</p>
SERVICES	Candidate Faculty Evaluation, Spring 2017 <i>University of Colorado Boulder</i>
SKILLS	<ul style="list-style-type: none"> • Languages: Python, OCaml, Rust, R, Java, C, Ruby • Web development: AngularJS, Django, Flask, JS, HTML, CSS • Data processing: Hadoop, Kafka, RabbitMQ, Storm, Spark, Elasticsearch • Data analysis: Scikit-learn, Pandas, Weka, GDAL, ArcGIS • Databases: MySQL, Redis, Cassandra • Tools: Amazon AWS Cloud, JIRA, Loggly, Jenkins, Travis CI, Git • Operating Systems: Unix/Linux, Windows, Android • Configuration management tools: Puppet, Ansible • Monitoring tools: Nagios, Graphite • Web servers: Nginx, Apache, Tomcat, NodeJS
LEADERSHIP	Co-President, <i>Colorado Data Science Team</i> since Fall 2016
OUTREACH	<p>GMR group, Bangalore, India</p> <p><i>Corporate social responsibility intern</i> May 2012 - July 2012</p> <p>The organization works towards empowering underprivileged, uneducated youth by teaching them technical skills. Helped in designing the course curriculum and organizing a pan-Bangalore NGO meet to benefit the students.</p> <p>Udaan, BITS Pilani, Goa, India</p> <p>Core member Aug 2012 - May 2014</p> <p>Worked towards empowering the housekeeping women on campus through basic education, social activities, awareness workshops and health-camps.</p>