Shrikanth Narayanaswamy Chandrasekaran





snaraya7@ncsu.edu or nc.shrikanth@gmail.com

Raleigh, North Carolina, USA

I am Shrikanth a Ph.D. candidate in Computer Science at NC State University with 10 years of industry experience. My research interest includes Software Engineering and Machine Learning.

EDUCATION

2017 - Ph.D. Candidate in Computer Science at North Carolina State University (*Graduating* - December 2021)

2004 – 2008: 4 year full-time **Bachelor of Engineering in Electronics and Communication**, Saveetha Engineering College, affiliated to Anna University – Chennai

INDUSTRY EMPLOYMENT HISTORY (2008 - current)

Summer 2021 Microsoft, USA

Role: Research Intern | Domain: Software Engineering Research

Developer Satisfaction (productivity): Perform large-scale data analysis on software engineers' feedback about their day-to-day work and on hundreds of software repositories to offer actionable recommendations (through machine learning models) to improve developer satisfaction across a large unit within Microsoft.

Summer 2020 Fujitsu Laboratories of America, USA

Role: Research Intern | Domain: Software Engineering Research

Low code platform: Improved deep learning-based 'Code Retrieval' models (using CodeBERT & CodeSearchNet deep learning models) that catalyze developer productivity.

2014 – 2017 Accenture Labs, India (Full-time)

Role: Technology R&D Specialist | Domain: Software Engineering Research

- Mentored both interns (on data science tasks) and software developers (for product development).
- Presented the work to leadership on a quarterly basis.
- Research Project #1: Crowdsourcing Performed large scale data analysis to find obstacles for enterprises to crowdsource software development
- Research Project #2: Log Analysis Analyzed voluminous incident tickets and their associated log files of a supermarket chain to prescribe solutions to minimize incident resolution time.
- Research Project #3: Requirements Visualization Built Eclipse IDE plugins for visual requirements and component reuse driven rapid application composition.
- Recognized for outstanding contributions (patents and publications)

2011 – 2014 ABB India Limited, Bangalore India (Full-time)

Role: Software Engineer | Software Development, LV Systems R&D | Domain: Electrical

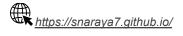
- Project #1: Product Development Managed the software life-cycle of a standalone Low voltage switchgear configuration and reporting product.
- Project #2: Trained a team of software engineers to transition their skills from .NET to Java-based technologies.
- Star Employee for a quarter for meeting a short deadline

2008 – 2011 Infosys Limited, Chennai India (Full-time)

Role: Senior Systems Engineer | Domain: Banking

- Project #1: Product Finmapper Single-handedly embedded the entire stack (both front and back-end) of a standalone banking product into an Eclipse IDE environment.
 - o Integration was done to improve the productivity of senior integration engineers at the client site.

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- Certifications: Sun Certified Java Programmer and Sun Certified Web Component Developer
- Finacle on the spot award for learning a niche skillset and integrating an entire product onto an IDE as a newbie.

SKILLS

- * Programming: Java (SCJP and SCWCD certified) & Python. Fundamentals: Data Structures, Algorithms & Compilers
- * Statistics: Hypotheses testing, effect size, analysis of distributions, etc
- * *Machine Learning:* Predictive/Estimate modeling, Weka data mining, scikit, Deep learning (Tensorflow, CNN & RNN) Carrot2, ELK, and OPEN NLP. *Visualization:* Plotly, MATLAB, R, etc.
- ❖ Front-End: Java Swing, Eclipse Plugin development, and HTML-CSS. Database: RDBMS (MySQL & MariaDB) and Kusto (Microsoft).
- Distributed computing: Python multiprocessing on High-Performance computing

GRANTED PATENTS

- 1. Method and system for visual requirements and component reuse driven rapid application composition
- 2. Incident Prediction and Prevention
- 3. Generating a Test Script Execution Order

RESEARCH (Research Assistant, North Carolina State University) 2017 to present

Interest: Software Engineering and Machine Learning | Focus area: Software Quality Assurance | **Lab:** RAISE(http://ai4se.net/) Our recent empirical study confirms that "96% of the time, we do not want and we do not need data-hungry methods" (refer to publication [1] below).

Other research areas: Code Retrieval, Crowdsourcing, Test case prioritization, and Software Maintenance.

PUBLICATIONS

- 1. N. C. Shrikanth, Suvodeep Majumder, and Tim Menzies. Early Life Cycle Software Defect Prediction. Why? How? (To appear in ICSE '21).
- 2. N. C. Shrikanth, William Nichols, Fahmid Morshed Fahid, and Tim Menzies. Assessing Practitioner Beliefs about Software Engineering. (To appear in EMSE '21 Journal).
- 3. N. C. Shrikanth, and Tim Menzies. 2020. Assessing Practitioner Beliefs about Software Defect Prediction. (ICSE '20 SEIP) \(\bigvee \) (Best Paper Nominee).
- 4. Mehdi Bahrami, N.C. Shrikanth, Shade Ruangwan, Lei Liu, Yuji Mizobuchi, Masahiro Fukuyori, Wei-Peng Chen, Kazuki Munakata, and Tim Menzies. 2021. PyTorrent: A Python Library Corpus for Large-scale Language Models (Under Review).
- 5. Anurag Dwarakanath, N. C. Shrikanth, Kumar Abhinav, and Alex Kass. 2016. Trustworthiness in enterprise crowdsourcing: a taxonomy & evidence from data. (ICSE '16 SEIP).
- 6. Anurag Dwarakanath, Upendra Chintala, **Shrikanth N.** C., Gurdeep Virdi, Alex Kass, Anitha Chandran, Shubhashis Sengupta, and Sanjoy Paul. 2015. CrowdBuild: a methodology for enterprise software development using crowdsourcing (CSI-SE ICSE '15).

TEACHING ASSISTANT

- 1. CSC 440 Database Management Systems Instructor: Dr. Rada Chirkova
- 2. CSC 495 **Software Testing** Instructor: Dr. Kathryn T. Stolee
- 3. CSC 510 Software Engineering Instructors: Dr. Jamie Jennings, Dr. Nicholas A. Kraft, and Dr. Emerson Murphy-Hill

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REVIEWER

- ★ Empirical Software Engineering Journal
- ★ Information and Software Technology Journal

TALKS

- * ICSE'21 Early Life Cycle Software Defect Prediction. Why? How? https://youtu.be/oHCUJnWygDk
- ❖ ICSE'20 Assessing Practitioner Beliefs about Software Defect Prediction https://youtu.be/UokXMoP-v7Q?t=2094
- ❖ ICSE'20 What Disconnects Practitioner Belief and Empirical Evidence https://youtu.be/UbuG6UwVzuU