

# Vivek Nair

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## CONTACT INFORMATION

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## EDUCATION

**North Carolina State University**  
Ph.D. candidate in Computer Science  
Advisor: Dr. Tim Menzies  
Current GPA: 3.85/4.0

Raleigh, NC  
Summer 2013 - Current

**National Institute of Technology, Durgapur**  
M.Tech in Information Technology  
GPA: 8.93/10

Durgapur, India  
2011

**West Bengal University of Technology**  
B.Tech in Computer Science  
GPA: 7.23/10

Kolkata, India  
2009

## PROFESSIONAL EXPERIENCE

### Research Assistant

North Carolina State University (NCSU)

*Real-world Artificial Intelligence for Software Engineering (RAISE)*

*January, 2015 onwards*

- **Recommendation System for Data Analyst**

Analytics process is undertaken by users to mine large data sets, and this process is adhoc and highly customized. Recommendation system, which learns from code written by expert programmers, can be used to bridge the gap between the expert data analysts and novice data analysts. Code is analyzed to build a Markov-model, which is then be used to provide recommendations to users. In our initial experiments, use of tf-idf (term frequency inverse document frequency) has been proven useful for dimensionality reduction.

Languages used: Python

### Teaching Assistant

North Carolina State University (NCSU)

*Design and Analysis of Algorithm(CSC505)*

*January, 2014 - December, 2014*

- Hold weekly office hours and grade exams.

### Research Assistant

North Carolina State University (NCSU)

*Distributed Systems Research Group on Autonomy, Resilience, Collaboration, and Energy (DANCE)*

*May, 2013 - December, 2013*

- **Detecting Contention in Data Center Environment**

Interference in a data center leads to performance variability, which causes losses to data center operators. Dynamically detecting and mitigating interference would save money for the operators. Use of hardware performance counters have proved useful in our initial experiments.

Languages used: Python, Shell script

Various systems used as the testbed: Hadoop, Web service (RUBiS and httpperf)

### Software Engineer

Samsung Software Engineering Labs, India

*File System & Memory Team*

*June 2011 - May 2013*

- Worked on various projects based on NOR Flash for Ultra Low Cost cell phones.
- Developed tools to write data into One Time Programmable area of the NOR Flash.
- Worked on various filesystems like TargetFFS-NAND, Target-NOR, TargetZFS and Target FAT.  
Languages used: C

## Research Assistant

Under Guidance of S. Choudhury

National Institute of Technology, Durgapur

March 2010 - May 2011

- **An Integrated Routing, Scheduling and Assembly scheme for OBS network**

The proposed schemes for OBS networks minimize the burst loss probability of individual bursts and at the same time achieve the goal of maximization of the minimum unutilized bandwidth of links in Optical Burst Switched networks.

Languages used: Java, Shell script

## TECHNICAL SKILLS

- Language: C (6+ years), Java (2+ years), Python (15 months), Shell script
- OS: Linux, Windows
- Version Control: Perforce, git

## PUBLICATIONS

- Subhrabrata Choudhury, **Vivek Nair**, Jaydeep Howlader, Bikash Choudhury and A.K. Mal. “*An integrated routing and offset-time adaptation scheme for OBS network*” in ICDCN,2015 (to appear).
- Subhrabrata Choudhury, **Vivek Nair**, A.K. Mall. ‘*A Routing Scheme for OBS Networks*’, in Journal of Optical Communications and Networking(JOCN), 2013.
- Subhrabrata Choudhury, **Vivek Nair**, Bikash Choudhury, Pallab Biswas, A.K. Mall. ‘*A family of flexible offset-time based wavelength schedulers for OBS edge-nodes*’, in ICP,2012.
- Pallab Biswas, **Vivek Nair**,Soumen Nandi,Soumendra Nath Biswas,Amitav Biswas,Animesh Dutta. ‘*Session management protocol for virtual classroom in teleteaching*’, in ICCIT, 2010.
- Animesh Dutta, **Vivek Nair**, Ranjan Dasgupta, Swapan Bhattacharya. “*Ontology Based Semi-formal Design of Teleteaching System*”, in TENCON, 2010.
- **Vivek Nair**, Animesh Dutta. “*Ontology based Session Management Protocol for Teleteaching Domain*”. ICCAE, 2010.

## HONORS AND AWARDS

- Awarded the Employee of the Month in the month of January,2012 at Samsung Engineering Lab
- Awarded Scholarship by the HRD Ministry for pursuing M.Tech