VIJAY KRISHNA PALEPU

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EDUCATION

University of California, Irvine, USA September 2012 - Current
Ph.D., Software Engineering, Current GPA: 3.99

University of Pune, India August 2006 - July 2010
B.Engg., Computer Engineering, First Class with Distinction

EXPERIENCE

Spider Lab, University of California, Irvine June 2012 - Current
Graduate Student Researcher *Irvine, CA, USA*

- Working on novel approaches to visualize, analyze and model program executions.
- Developed software infrastructure for the instrumentation, analysis and exploration of Java program executions.
- *Languages and Tools:* Java, ASM Bytecode Manipulation Library (asm.ow2.org), Javascript, D3.js.

Microsoft June 2015 - September 2015
Software Engineering Intern *Redmond, WA, USA*

- Worked on the Microsoft Word application.

University of California, Irvine January 2012 - March 2012
Graduate Student Researcher *Irvine, CA, USA*

- Worked on a design project for an internet game based on the U.S. Presidential Elections.
- *Languages and Tools:* HotGloo Wireframing tool.

Indigo Architects August 2010 - June 2011
Software Developer *Pune, MH, India*

- Part of the Operations team of Zeus Travel Office Product Team. Built applications to monitor product behavior.
- *Languages and Tools:* C#, XAML, Silverlight, WCF.

Persistent Systems October 2009 - March 2010
Project Intern *Pune, MH, India*

- Developed an Eclipse Plug-in to statically reverse engineer a Sequence Diagram for Java Projects to aid code comprehension. Final Year Project at University of Pune, Army Institute of Technology.
- *Languages and Tools:* Java, Eclipse Standard Widget Toolkit, Eclipse Java Development Tooling (JDT).

PUBLICATIONS

- **Palepu, Vijay Krishna** and Jones, James, **"Revealing Runtime Features and Constituent Behaviors within Software"**, 2015, 3rd IEEE International Working Conference on Software Visualization.
- Reddy, Nishant; Kim, Junghun; **Palepu, Vijay Krishna** and Jones, James, **"SPIDER SENSE: Software-Engineering, Networked, System Evaluation"**, 2015, 3rd IEEE International Working Conference on Software Visualization.
- **Palepu, Vijay Krishna** and Jones, James, "**Discriminating Influences among Instructions in a Dynamic Slice**," 2014 29th IEEE International Conference on Automated Software Engineering (ASE), 15-19 September 2014.
- **Palepu, Vijay Krishna**; Xu, Guoqing and Jones, James, "**Improving Efficiency of Dynamic Analysis with Dynamic Dependence Summaries**," 2013 28th IEEE International Conference on Automated Software Engineering (ASE), 11-15 November 2013.
- **Palepu, Vijay Krishna** and Jones, James, "**Visualizing Constituent Behaviors within Executions**," 2013 1st IEEE International Working Conference on Software Visualization (VISSOFT), 27-28 September 2013.

· Martie, Lee; **Palepu, Vijay Krishna**; Sajnani, Hitesh and Lopes, Cristina, "**Trendy bugs: Topic trends in the Android bug reports**," 2012 9th IEEE Working Conference on Mining Software Repositories (MSR), 2-3 June 2012.

SOFTWARE PROJECTS

· Cerebro: Interactive visualization of software program executions. `http://spideruci.github.io/cerebro/`
· Blinky: Java bytecode instrumentation tool for runtime program analysis. `https://github.com/spideruci/blinky`
· Spider SENSE: Real-time web-based software analysis dashboard and build infrastructure. `https://github.com/spideruci/sense-vis`; `https://github.com/spideruci/tacoco`
· PL241 Compiler: SSA-based optimizing compiler; supports register allocation and code generation for DLX (pronounced 'Deluxe') RISC processor architecture. Code: `https://bitbucket.org/vpalepu/pl241-compiler`
· Interactive tutorial for Hypothesis testing & t-Tests. Demo: `http://www.ics.uci.edu/~vpalepu/205project/`
· Lambda Calculus Interpreter for alpha & beta reductions. Code: `https://gist.github.com/VijayKrishna/5180292`
· Java Code to Sequence Diagram Converter: Eclipse plug-in to statically reverse engineer Java code snippets to Sequence Diagrams.

AWARDS

· SIGSOFT Travel Grant, ACM, 2014.
· Informatics Fellowship, Department of Informatics, University of California, Irvine, 2013.
· AGS Travel Grant, University of California, Irvine, 2013.
· Chair's Award, Department of Informatics, University of California, Irvine, 2012.
· Bronze Medal and Scholarship Award, Department of Computer Sciences, Army Institute of Technology, University of Pune, 2011.

PROGRMMING SKILLS

· Over 5,000 lines: Java, Java Bytecode Re-engineering.
· Over 1,000 lines: LaTeX, HTML & CSS, Javascript, (Bash) Shell.
· Familiar: C++, C#, R, Matlab.
· Tools and Libraries: ASM Bytecode Library (asm.ow2.org), D3.js, Twitter Bootstrap, Maven, Git.

TEACHING

· Guest Speaker on Testing and Verifying Software Behavior, Software Testing and Anslysis (UCI, Spring 2014, Graduate course)
· Guest Speaker on QA and Testing, Introduction to Software Engineering (UCI, Summer'13)
· Teaching Assistant, Senior Design Project (UCI, Fall'12, Winter'13, Spring'13)
· Reader, Concepts in Programming Languages II (UCI, Spring'12)
· Reader, Senior Design Project (UCI, Spring'12)

PROFESSIONAL AFFILIATIONS

· Student member of the Association for Computing Machinery (ACM) and the Special Interest Group on Software Engineering (ACM SIGSOFT).
· Student member of the Institute for Software Research (ISR), University of California, Irvine.

GRADUATE COURSE WORK

Software Engineering; User Interface Design and Evaluation; Requirements Engineering; Information Retrieval; Software Performance and Reliability; Analysis of Programming Languages; Machine Learning; Software Architecture; Software Testing and Analysis; Quantitative Methods; Advanced Compiler Construction.