

# RUTURAJ KIRAN VAIDYA

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## CURRENT RESEARCH AND SKILLS

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<b>PHD Dissertation Title:</b>	Assess the effectiveness of applying security checks on software binaries
<b>Advisor:</b>	Dr. Prasad Kulkarni
<b>Programming Languages/Tools:</b>	Python, C, C++, x86 Assembly; IDA Pro, Ghidra, Pin, Linux, Android OS etc.
<b>Experience/Interests:</b>	Software security, reverse engineering, program analysis and instrumentation, and computer systems issues

## EDUCATION

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<b>University of Kansas</b> (Current GPA: 3.64) PHD Computer Science	Lawrence, KS Fall 2023 (Expected)
<b>University of Kansas</b> MS Computer Engineering ( <i>Thesis track</i> )	Lawrence, KS Fall 2019
<b>University of Mumbai</b> BE Electronics Engineering	Mumbai, India Spring 2014

## RESEARCH AND TEACHING EXPERIENCE

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<b>University of Kansas</b> <i>Graduate Research Assistant</i>	Lawrence, KS Since Jan 2019
<b>University of Kansas</b> <i>Graduate Teaching Assistant</i>	Lawrence, KS Jan 2018   Dec 2018
Teaching Assistant for Compiler Construction (EECS 665) and Operating Systems class (EECS 678)	

## INDUSTRY WORK EXPERIENCE

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<b>LTI (Larson and Toubro Infotech)</b> <i>Linux System Administrator</i>	Mumbai, India Dec 2014   Mar 2017
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## SELECT PROJECTS

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- Reverse engineering challenges - Python, C++, X86 Assembly**  
This ongoing project focuses on solving reverse engineering challenges such as - type inference, control flow reconstruction, etc. using static/dynamic analysis.
- Application of compiler level techniques on program binaries - Python, C++, X86 Assembly**  
This is another ongoing project which explores challenges in applying security techniques at compiler level on executable programs.
- Compromising package manager security - Python**  
This class project aimed at finding security challenges in package manager ecosystems, which later published in NSS conference as a full paper.
- NLP-Sentiment analysis and recommendation system - Python (*machine learning*)**  
This project consisted following two parts - binary and multi-class sentiment analysis and a movie recommendation system using various machine learning algorithms.

## PUBLICATIONS

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- Vaidya, Ruturaj "**Implementing SoftBound on Binary Executables**" (2019): ProQuest Dissertations and Theses. Web.
- Vaidya, Ruturaj K., Lorenzo De Carli, Drew Davidson, and Vaibhav Rastogi. "**Security Issues in Language-based Software Ecosystems**" arXiv preprint arXiv:1903.02613 (2019).
- Taylor, Matthew, Ruturaj K. Vaidya, Drew Davidson, Lorenzo De Carli, and Vaibhav Rastogi. "**Defending Against Package Typosquatting**" Network and System Security. NSS (2020). Lecture Notes in Computer Science, vol 12570. Springer, Cham.