

# KANWARDEEP SINGH WALIA

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## EDUCATION

### Master of Science, Computer and Information Technology

Purdue University, West Lafayette, Indiana

Expected: **May 2022**

### Bachelor of Science, Computer Engineering

California State University (CSU), Sacramento, California

August 2015 – December 2019

GPA: **3.55**, Cum Laude, Dean's Honor Roll

### Related Course Work:

Information Technology Project Management  
Data Structures and Algorithm Analysis  
Computing Theory and Languages  
Computer Interfacing

Organizational Impact of Information Tech.  
Programming Concepts and Methodology  
Computers Networks and Internet  
Operating Systems Principles

Experimental Statistics  
Computer Software Engineering  
Operating Systems Pragmatics  
Advanced Computer Organization

## SKILLS

### Programming/Scripting Languages:

Python, Java, C++, C, Visual Basic, C#, SQL, Go

### Other Computer Languages:

JavaScript, Objective-C, Swift, Rust, PHP, Shell, Bash, Verilog, VHDL

### Engineering Tools:

Visual Studio, Eclipse, Git, DynamoDB, MongoDB, Android Studio, Vim, Jenkins

### Tools/Packages:

Microsoft Office, LaTeX, Junit, Model Sim, Multisim, Altera Quartus, Xilinx

### Platforms/Systems:

Ubuntu, Kubernetes, Windows (10, Server, IoT, 08, 07), Mac OS, Linux, UNIX

### Software Methodology:

Agile, Scrum, Extreme Programming, Waterfall

### Multilingual Language Skills:

Proficient in English, Hindi, Punjabi

### Organization and Communication:

Strong technical report writing, commended on the ability to communicate with teammates and members of the public, proven leadership qualities, ability to adapt to new environments quickly, professional at managing time and prioritizing tasks.

## PROFESSIONAL EXPERIENCE

### Teaching Assistant, Purdue University, West Lafayette, Indiana

**August 2020 – Present**

- Teaching labs of CNIT 175 - Microsoft Visual Basic. Assisting students during office hours, emails, and grading assignments.

### Research Assistant, California State University, Sacramento, CA

**September 2019 – August 2020**

- [Presented](#) a [paper](#) in IEEE IRI 2020 conference and received the Best Paper Award.
- Researched on **8 million passwords** dataset using data mining techniques in python.
- Investigated the relevance of the data, gathered new insights, and increased the usability of passwords to make them easier to remember without compromising security.

### Software Researcher, National Institute of Standards and Technology (NIST), MD

**June 2019 – August 2019**

- Collaborated with the Software Assurance team to perform **30,000 C, C++** tests on a static analysis tool.
- Developed an information extractor using python and bash scripts to perform automated testing.
- Analyzed whether the tool passed all test cases and detected the security risks.
- Co-authored a [report](#) of findings and submitted it in NIST's interagency report system.

### Software Engineer, California State University, Sacramento, CA

**September 2018 – May 2019**

- Developed software and led the Robotic Bee Pollinator senior design project team of 5 members.
- Planned, designed, and produced a prototype of a self-driving, voice-operated pollination robot, capable of assisting plants.
- Utilized ROS and Linux terminal commands. Designed bash, python, C, and C++ programs to get data from I/O devices such as LIDAR and motors. Gave robot the ability to detect plant rows, making it capable of creating its own travel routes.
- Focused on managing the team and completing tasks before the deadlines. Published a [paper](#) and [presented](#) at CSUS.

### Research Assistant, California State University, Sacramento, CA

**January 2019 – May 2019**

- Worked on real user access authentication project with US Transportation Command.
- Created a tool to detect the keystrokes pattern of a user. Detected a fake user for **93%** of the time during its testing phase.
- Programmed the tool using python, nginx, npm, and tensorflow.

## LEADERSHIP EXPERIENCE & INVOLVEMENT

Building Supervisor, University Union at CSUS

January 2019 – December 2019

Event Supervisor, University Union at CSUS

January 2018 – December 2018

Vice President, Tau Beta Pi Engineering Honor Society

August 2018 – December 2018

Industry Liaison, Association for Computing Machinery (ACM)

August 2018 – December 2018

Member, Institute of Electrical and Electronics Engineers (IEEE)

March 2018 – December 2018