# Rishi Desai

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## EDUCATION

**UNIVERSITY OF ILLINOIS AT URBANA CHAMPAIGN**
BS in Computer Science
Expected May 2021

## LINKS

Github:// **therishidesai**
LinkedIn:// **rishidesai1**

## SKILLS

### PROGRAMMING

Java • Python • C++
Go • C • Rust
OpenCV • Numpy • NixOS
ROS (Robot Operating System)

## OPEN SOURCE

### CONTRIBUTIONS

• gonum - numerical libraries for golang
• nvdocker - python library to create docker containers with gpu access
• plant - CLI tool for arbor microservices framework
• ILLIXR - Illinois Extended Reality testbed, the first open-source full-system Extended Reality (XR) testbed.
• cfg - A tool to manage configuration files and use them in production for Confbase

## COURSEWORK

### UNDERGRADUATE

Discrete Structures
Data Structures
Software Design Studio
Computer Architecture
Computational Photography
Algorithms and Models of Computation
Computer System Organization
Operating System Design
Compiler Construction
Distributed Systems
Machine Learning

## STUDENT ORGS

### ACM@UIUC

| Member, Vice Chair
August 2017 – Present | Champaign, IL
Vice Chair from 2018 to 2019. Managed ACM Projects and helped organize HackIllinois.

## EXPERIENCE

### ANDURIL Software Engineering Intern

May 2020 - August 2020 | Irvine, CA

- Designed and built a service to manage an OpenVPN server for secure access to the remote Lattice mesh network.
- Ported custom **NixOS** setup to work with Raspberry Pi's for rapid prototyping.
- Worked with the programming language group on creating a Python API for our numerical **DSL** (Domain Specific Language). This would allow more people to utilize the highly optimized **DSL** compiler to write fast numerical kernels in an easy to write language like Python.
- Technologies: Go, NixOS, OpenVPN, OpenSSL, Haskell, Python, LLVM

### SAMSUNG DRVLINE Software Engineering Intern

May 2019 - August 2019 | San Jose, CA

- Worked on the Platform/Integration team for the Samsung DRVLine ADAS Framework. Designed and built the integration testing framework to test perception algorithms with lower level functional algorithms (e.g.: Lane Departure Warning). This improved developer productivity with faster testing feedback. Also helped port and optimize the perception algorithms into the framework.
- Technologies: C++, Python, ZeroMQ, Docker, Jenkins

### CISCO Software Engineering Intern

May 2018 - August 2018 | San Jose, CA

- Designed and built a micro-service to automate provisioning of virtual networks, subnets, and virtual machines on to Microsoft Azure via the DNA (Digital Network Architecture) Center web application.
- Technologies: Java, Microsoft Azure, SpringBoot, JavaScript, Cisco IOS, RabbitMQ

### BLUEBERRYHOME Software Engineer

May 2016 - December 2017 | San Francisco, CA

- Designed and built a tool to reply to text messages with a web chat app, and a framework to run nightly cronjobs on our database.
- Technologies: NodeJS, AngularJS 1.x, ExpressJS, MongoDB, AWS, Docker

### NVIDIA Robotics Intern

May 2015 - September 2015 | San Jose, CA

- Built demo robots for the Jetson TK1 using ROS (Robot Operating System)

## PROJECTS

### PROJECT HEDWIG

June 2018 - Present | github.com/apache8080/hedwig

- Programmed a Traxxas Rally Slash RC Car to autonomously travel a mapped room at high speeds similar to the MIT RACECAR project, using **ROS**, Jetson TX1, and Arduino Uno.

## RESEARCH

### DR. SARITA ADVE'S RESEARCH GROUP | Lab Assistant

September 2018 – Present | Champaign, IL
Working with Dr. Sarita Adve's Scalable Specialization project on building a benchmark for **SLAM** and **AR/VR** applications to motivate new computer architecture research for **AR/VR** and Robotics.