

# ISHAAN PARANJAPE

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Augmented Design Lab, UC Santa Cruz

webpage: <https://ishaan95.github.io> ◊ github: ishaan95

## EDUCATION

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- University of California, Santa Cruz** 2019 - present  
PhD, Computational Media  
Advisor: Prof. Jim Whitehead
- University of California, Santa Cruz** 2017 - 2019  
Master of Science, Computer Engineering  
Masters Project: *Road Intersection Generator for Autonomous Vehicle Simulations*
- Savitribai Phule Pune University** 2013 - 2017  
Bachelor of Technology, Electronics and Telecommunications Engineering

## RESEARCH

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- Graduate Student Researcher, Augmented Design Lab** Summer 2018, Summer 2019  
*University of California, Santa Cruz*
- Development of a road intersection generator for the Unreal Engine. This generator contains two applications, *IntGen* and *Sumo2Unreal*. This project also included the development of a modified version of *Netgenerate*, an road network generation application for the SUMO traffic simulator.

## TEACHING

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- Graduate Student Instructor** Summer 2020, Session 1  
*University of California, Santa Cruz*
- CMPM121 - Game Technologies (Unreal Engine)
- Teaching Assistant** Fall 2020, Fall 2021, Fall 2022, Fall 2023  
*University of California, Santa Cruz*
- CMPM121 - Game Technologies (Unity Engine)
- Teaching Assistant** Fall 2019, Spring 2022  
*University of California, Santa Cruz*
- CMPM170 - Game Design Studio I, CMPM172 - Game Design Studio III
- Teaching Assistant** Winter 2022  
*University of California, Santa Cruz*
- CMPM163 - Game Graphics and Real-time Rendering
- Teaching Assistant** Spring 2021  
*University of California, Santa Cruz*
- CMPM120 - Game Development Experience
- Teaching Assistant** Winter 2023  
*University of California, Santa Cruz*
- CMPM176 - Game Systems

## INDUSTRY

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**Summer Intern, Autonomous Vehicle Simulation Intern** Summer 2021, Summer 2022  
*Ford Motor Company, Autonomy divisions (Ford Autonomous Vehicles, Ford Next)*

- Worked with the simulations team, working on test scenarios and automated simulation environment generation

## AWARDS AND FELLOWSHIPS

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**Regents Fellowship** Winter 2020  
*University of California, Santa Cruz*

**Department Fellowship** Winter 2020  
*Computational Media Department, UC Santa Cruz*

## PUBLICATIONS

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**A Modular Architecture for Procedural Generation of Towns, Intersections and Scenarios for Testing Autonomous Vehicles** IEEE Intelligent Vehicles Symposium 2020

- Description - This paper details the CruzWay: A generator for generating roads, simulation agents such as vehicles and pedestrians (driven using behavior trees) by taking a scenario description as input.

## SOFTWARE

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**Sumo2Unreal** Summer 2018 - present

- Description - Road network file importer from the SUMO standard to procedural road geometry (with splines to guide vehicles) on the Unreal Engine. Has the capability to generate large city scale road maps as well as road intersections with 3D models such as stop signs and lane markings.
- Github link - <https://github.com/AugmentedDesignLab/Sumo2Unreal>

**IntGen** Spring 2019 - present

- Description - A road intersection specification generator. Uses the cement application framework. Can generate a road intersection with extensive details about each incoming road.
- Github link - <https://github.com/AugmentedDesignLab/intgen>