**Sumeet Batra**

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<https://github.com/SumeetBatra>

###### EDUCATION

**University of Colorado Boulder; BS in Computer Science, Minors in Applied Math and Japanese *(Senior-year 1)***

**Graduation: May 2020**

University of Colorado Boulder – 4.0 GPA Cumulative

* Relevant Coursework: Algorithms, Linear Algebra, Multivariable Calculus (3), Data Structures, Operating Systems, Intro to Robotics, Applied Probability, Machine Learning, Deep Learning
* Semester study abroad in Japan – Japanese Language at Doshisha University
* Awarded Engineering Honors Scholarship
* Awarded Dean’s List for Academic performance all semesters

###### Technical Skills

* Python, OpenCV, PyTorch, Robotics OS (ROS), Android Studio, C++
* Object Oriented Programming, Agile Development
* Familiar with Keras, Tensorflow, Scala, Android Studio, Java, C

**RELATED EXPERIENCE**

**Undergraduate Research Assistant: Machine Learning for Human Robot Interaction August 2018 – Present**

* Using machine learning algorithms to design a framework for robotic assistants to assist humans in complex tasks in an unsupervised setting.
* Framework will allow robotic assistants to assist with tasks it hasn’t seen before by drawing on prior knowledge/learning.

**Autonomous Package Delivery Drone Project August-December 2017**

* Created a delivery drone that uses real time object recognition for detecting “packages” to pick up that would then pick up the package and return it to the drone’s starting location
* Used Parrot Bebop 2 as the drone platform that sends video data to a separate PC running a Region Proposal Neural Network (Faster-RCNN) for real time object recognition capable of doing 30fps single class detection with a 1080TI and Intel i7 CPU

**Undergraduate Research Assistant: Discovery Learning Apprenticeship (DLA) August 2016 – May 2017**

* Worked at the Guided Wave Optics Lab (GWOL) to research the potentials of optical interconnects and data center disaggregation to improve data center efficiency. Project involved using an FPGA as a driver to determine bit error rate in data transmission across optical chips at 25 Gbps speed.

**Undergraduate Research Assistant: Swarm Robotics + Augmented Reality Summer 2016**

* Worked at the Correll Lab to develop an AR mobile application for tracking robotic

“Droplets” that behave as atoms/molecules, and overlaying atomic information over the

Droplets using the OpenCV library.

* In the process of co-writing and publishing a paper with faculty mentor Nikolaus Correll on using Augmented Reality to improve human-swarm interaction

**LEADERSHIP AND INVOLVEMENT**

Volunteer, CU Students for the Exploration and Development of Space (CUSEDS) Outreach. **October 2015**

* Paneled for 8th grade students creating prototype landers for dropping payloads on Mars
* Assisted in refining and revising students’ ideas and prototypes

**ARTICLES AND PUBLICATIONS**

* Currently co-authoring a paper with Nikolaus Correll on Swarm Robotics UROP research project
* Wrote a research paper on the impact of the digital revolution on modern technology, as well as understanding the impact of current technologies such as augmented reality, IoT, and quantum computing