

# RISHABH CHAKRABARTY

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## Work|Research experience

### Intern, Empires of the Mind Project

06/2020 – 07/2020

London School Of Economics, Executive Ambassadors Club

[rb.gy/bfkdi5](http://rb.gy/bfkdi5)

The Executive Ambassadors Club is an Alumni Initiative of LSE IDEAS, Harvard University, Warwick Business School, and Williams College with the support of Stanford University Center for Professional Development at the School of Engineering.

### Project Lead

04/2000 – 06/2020

Opportunity Insights, Harvard University, , United States

Leading Research team collaborating with the Opportunities Insights Program, a non-partisan, not-for-profit organization located at Harvard University seeking to translate insights from rigorous, scientific research to policy change.

My team assists Opportunity Insights by collecting county-level economic data, particularly unemployment insurance claims and bankruptcy claims, and real-time public data to create well-processed, high-quality datasets from unstructured data.

### Machine Learning Researcher| Data Visualisation

04/2020 – 07/2020

Indigo Theory, Denver, United States

<https://www.indigotheory.io>

We are a group of highly motivated and talented UI/UX designers, Blockchain developers who develop award winning products for Social good

### Reinforcement Learning

#### Subgroup Leader

01/2020 – 04/2020

Artificial Intelligence Club@University of Wisconsin-Madison, United States

I lead the Subgroup for Reinforcement Learning which is primarily involved with activities pertaining to Stock Selection, Change-point detection, and Back-testing. Am specifically working on Stock selection strategies, Reward function engineering, and, devising Multi-agent Deep Reinforcement Learning agents.

### Founder

02/2020 – present

Undergraduate Research Opportunities Program

Founded the Undergraduate Research Opportunities Program to encourage global interdisciplinary research spanning universities and industry. Current member researchers also come from Ivy league

## Work|Research experience

Universities for instance, Cornell University, MIT to name a few. The research done by the community is Open-Source and host more than 80 researchers in the community.

### Co-Founder

09/2015 – present

Acord Studios , Australia

<https://acord.software>

Currently engaged in the development of Stellarios, a suite of games, applications, and tools used in a variety of software applications, noteworthy to mention is in controlling exploratory rovers.

Our team has contributed to over 47 Open-Source projects and developed more than 35 website and other UI/UX designs.

### Autonomous Systems and Sensor Fusion Team

10/2019 – 01/2020

Antriksh Labs , Jaipur, India

Was specifically involved in the development of control systems for the Instrument Deployment Device(Robotic Arm)-Provided solutions for a) Joint positions for a given pose, b) Simultaneous localization and mapping(SLAM) modeling for the Navigation system, and, c) Denoising IMU and LIDAR data.

### Citizen Scientist

12/2019

Zooniverse-The University of Oxford

### Radio Galaxy Zoo: LOFAR-Looking for Supermassive Black Holes

Addressing this issue of component separation, "source finder" program which sometimes suffers from splitting a single radio source into separate components to survey images of hundreds of thousands of jets and galaxies.

### Project Star Notes, Project PhaedraHaEDRA, Centre for Astrophysics | Harvard & Smithsonian Institute

I work on digitizing notebooks of the Harvard Computer Science Researchers, and, early Harvard astronomers with the intent of linking these data to their original sources.

## Education

### Computational Neuroscience

07/2020

Neuromatch Academy

Neuromatch Academy is an online computational neuroscience summer school . The initiative stemmed from organizers of the CoSMo summer school and the Neuromatch online conference. A worldwide academy to train neuroscientists to learn computational tools, make connections to real world

## Education

neuroscience problems, and promote networking with researchers

### B-Tech Computer Science

#### Engineering, Minor

#### Communication Technology

07/2019 – present

Manipal Academy of Higher Education, Jaipur, India

#### Focus Areas:

Deep Learning, Deep Reinforcement Learning, Human-Computer Interaction.

### Concentration in Mathematics and Computer Science

Pace Jr. Science College

Higher Secondary School (HSC) Examination

## Technical Skills

### Programming Languages

Python

C/C++

R

MATLAB

Octave



### Domains

Deep Learning

Reinforcement Learning

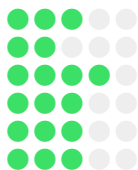
Data Visualization

Competitive Programming

Voice App Development

Blockchain/Protocol

development



## Selected Projects

### MIT Hacking Medicine-HealthHack 2020

05/2020

Massachusetts Institute of Technology

<http://news.mit.edu/2020/virtual-hackathon-unites-international-community-tackle-covid-19-0513>

**Winner:** Luxetics focused on exploring the potential benefits that near-infrared light therapy could provide to render transformative cognitive and health benefits. This NIR light therapy envisions the use of completely natural and non-invasive therapy, also known as PhotoBioModulation (PBM), which helps stimulate blood circulation in blood vessels employing precisely engineered wavelengths of Near-Infrared Light.

### Decentralized Pandemic Reserve

Consensus Health, Hyperledger, Openmined

<https://github.com/EXYNOS-999/decentralized-pandemic-reserve>

### Winner at Decentralized AI Hackathon by SingularityNET and Openmined \$12000 Prize 2nd Runner-Up ConsensusHealth STOP-COVID Hackathon \$3000 Prize

We propose a Decentralized Autonomous Supply Chain Database that can match resource need based on manufacturing equipment, materials, and product availability

## Selected Projects

### Voice App Development

Amongst the first 2000 Developers in the World to have their skills published in the Amazon Alexa Appstore. Developed and published over 20 skills worldwide on the Alexa platform to date engaging over **20,000** customers which included multimodal experiences combining Voice, Visuals and touch.

### NASA Space Apps Challenge

10/2019

NASA

<https://2019.spaceappschallenge.org/challenges/plans-near-and-far/raiders-lost-data/teams/dedomena-1/project>

Proposed an end-to-end Machine learning pipeline to fill in the missing data using a Generative Modelling program. A Stacked Denoising Autoencoder was used to tackle potentially noisy or corrupt sensor data.

### AWS JPL Open-Source Rover Challenge

03/2020

Amazon | Jet Propulsion Laboratory, NASA

[https://github.com/EXYNOS-999/AWS\\_JPL\\_OSR\\_DRL](https://github.com/EXYNOS-999/AWS_JPL_OSR_DRL)  
| <https://www.linkedin.com/in/edwinmontgomery/>

Built and validated a reinforcement learning (RL) model on AWS to autonomously drive JPL's Open-Source Rover between given locations in a simulated Mars environment optimizing energy consumption and risk of damage.

Worked with Edwin M former distinguished JPL, NASA Spacecraft design Engineer on this project.

### Distributed Contact Tracing

French Defence Innovation Agency

MeetSecure is a smartphone application that trains users to observe social distancing rules using cryptographic mechanisms. Proposal submitted to the French Defence Innovation Agency with: David Stodolsky, PhD Psychology, University of California, Irvine.

## Other Activities | Affiliations

### Global Member

- International Neuroinformatics Coordinating Facility,
- Federation of European Neuroscience Societies,
- Python Foundation,
- CERN High Energy Physics Software and Computing,
- The Planetary Society

Interests: Chess, Gaming, Hackathons, Movies.

## Social Media



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1460



Devpost