HARDIK BISHNOI

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EDUCATION

Bachelor of Technology (Computer Science and Engineering) Aug'19 – May'23
University: Guru Gobind Singh Indraprastha University, Delhi, India
Institute: Bharati Vidyapeeth's College Of Engineering, New Delhi, India
Advisor: Asst. Prof. Harsh Taneja
CGPA: 8.685 out of 10 (As of 4th Semester)

AISSCE, CBSE Board (XIIth Grade - Science Stream) Apr'18 – May'19
School: Venkateshwar International School, Dwarka, New Delhi, India
Subjects: Physics, Maths, Chemistry, Computer Science, English
Percentage: 94% overall, Placing in the top 1.4% from 1.3 million candidates

POSITIONS

Unlearners Tech, Hyderabad, India (Remotely conducted)
Back-end Developer and Core Team Member, Aug'21 – March'22

- Supervised the deployment and design of a portable, handheld health-monitoring device called *"Pebbl"*, enabling quick, easy and reliable measurement of temperature, oxygen saturation and auscultation. [Talk]
- Pitched a proposal at the *Cisco ThingQbator* program and successfully procured a funding of US$7000 for the startup project. [Certificate]
- Developed the API and Deployed a test-version of a website on Amazon Web Services

PROJECTS

- Galaxy Classification Using Multi-band Data from EFIGI dataset (SDSS) using CNNs Oct'21
  - Currently achieved ∼97% accuracy differentiating galaxies over classes of Hubble Stage T ranging from -6 to 10
- Music Generation through Generative Adversarial Networks (GANs) using Magenta.js and Magenta for Python Jan'21
  - Generated new music inspired by classical music. Classical music MIDI files are input to a MelodyRNN written in tensorflow.js.
- Website for Unlearners Tech Sept '21 – Feb '22
  - Developed the Back-end of the website using Node.js for typescript (ts-node) and Express.
  - Deployed the website on Amazon Web Services (AWS)
  - Learnt developing API for the website and logged the API documents on Notion

- **Current Project** : Simulation of a Social IoT Network using Query Generation Models (See *Research* section below)
- Project proposal and model for alternate docking mechanism for spacecraft Oct'20

RESEARCH

Journal Paper (in preparation)
H. Bishnoi, S. Sharma, A. Anand, H. Taneja, M.Luthra - *Trust Evaluation in Social Internet of Things* using Neural Networks

- Developing of a Query Generation Model to simulate a Social-IoT network in a city.
- Trust between these simulated devices can be quantified using neural networks

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COURSES, WORKSHOPS, and CONFERENCES

- **Notable Undergraduate Coursework**: Applied Physics (I & II), Applied Mathematics (I, II, III, & IV), Signals and Systems, Algorithm Design and Analysis, Data Structures, Theory of Automata, Communication Systems
- **Other Courses**: *Introduction to Astronomy Research 2021* , *Data-Driven Astronomy* on Coursera (University of Sydney)
- **Workshop**: Sagan Exoplanet Summer Workshop on Circumstellar Disks & Young Planets (NExSCI, 2021)
- **Winter School**: SOKENDAI Asian Winter School for Astronomy (2022)

SELECTED HONORS and AWARDS

- Cisco ThingQbator Award for "Remote Health Monitor" 2021
- Global Nominee, NASA SpaceApps Challenge 2020

LEADERSHIP, VOLUNTEERING and OUTREACH

- Head, Gaming Multimedia and Animation Society (GAMMA), BVP IEEE 2020-21
- Volunteered in Innovicon Conference 2020
- Instructor & Organizer, Game Development Series, BVCOE 2020

TECHNICAL SKILLS

Proficient: Python, SQL, C, C++, LaTeX, Git, HTML, Javascript Blender, Photoshop

Working Knowledge: MATLAB, Android, Java, Typescript and Unix shell scripting, ADQL, AWS, Notion

Libraries: Keras, TensorFlow, OpenCV, Jupyter, Matplotlib, Pandas, Numpy, RadVel, LightKurve, SciPy

Key Technologies: Deep Learning, Machine Learning, Astronomy, Image processing, Computer Vision, Signal Processing, 3D Modelling & Simulation, Game Development

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