CHETAN CHAWLA

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EDUCATION

Bachelor of Technology, Electronics and Communication Engineering Aug'15 – May'19
University: Guru Gobind Singh Indraprastha University, Delhi, India
Institute: Bharati Vidyapeeth's College Of Engineering, New Delhi
Projects Advisor: Abhishek Gagneja (Assistant Professor)
CGPA: 8.94 out of 10 (Top scores in class, Best Student Award by department)

AISSCE, Central Board of Secondary Education (XII grade) Apr'14 – May'15
School: Kendriya Vidyalaya Tagore Garden, New Delhi, India
Subjects: Physics, Maths, Chemistry, Biology, English
Percentage: 95% (Top scores in class, top 1.5% KVS India, appreciated by MHRD - Govt. of India)

POSITIONS

Academia Sinica Institute of Astronomy and Astrophysics, Taipei, Taiwan (Remote)
Research Intern, Jul'21 – Present
Supervisor: Dr. Alex Teachey (Distinguished Postdoctoral Fellow)

- Working on detection pipeline for identifying planet candidates in Transiting Exoplanet Survey Satellite's (TESS) Continuous Viewing Zones data. Achieved $\sim$ 93% recovery rate on test-set of published planets having orbital periods ranging from $\sim$ 0.5 to 300 days. [Talk]

ZS Associates, New Delhi, India
Business Technology Analyst, Jun'19 – Jan'21
Team: Data Analysis in Incentive Compensation Client Team

- Development and deployment of 1-click end-to-end systems for sales alignment of US medical representatives using SQL, Unix, Python, and Tableau. Automated high-impact modules like textual insights generation, data orchestration and processing, and automatic backup-deletion.

Indian Institute of Technology, Delhi, India - Electrical & Electronics Department
Research Intern, Jun'18 – Jul'18
Supervisor: Prof. Brejesh Lall (Electrical & Electronics Department, Head of Bharti Labs)

- Surveyed & implemented pedestrian trajectory prediction, benchmarked multi-object tracking algorithms, and curated Indian road dataset using vehicle-dashboard cameras. [Report]

Celestini Project India, Marconi Society & IIT Delhi, India
Research Intern, Jun'17 – Jul'17
Supervisor: Dr. Aakanksha Chowdhery (Google Brain, Princeton)

- Prototyped & tested a low-latency collaborative driver assistance system to prevent vehicle-to-vehicle and vehicle-to-pedestrian collisions using real-time networking of sensory data. [Video]

SELECTED HONORS AND AWARDS

- Project Champions award, ZS Associates, New Delhi, India 2019, 2020

- J.K. Pal Memorial: Best Student Volunteer Award, IEEE Delhi Section 2019
- Paul Baran Young Scholar Celestini Prize India 2017. Team Award: $1500 [Page 4] 2017
- Runner Ups: E-yantra Robotics Competition, CSE Department, IIT Bombay 2016

PUBLICATIONS

• ***Journal Paper (In Preparation)***
C. Chawla and A. Teachey - *Identification of Planet Candidates in Full-Frame Images from the TESS Continuous Viewing Zone*
To be submitted to Monthly Notices of the Royal Astronomical Society.

• ***Conference Poster Paper***
N. Garg, I. Janveja, D. Malhotra, **C. Chawla**, P. Gupta, H. Bansal, A. Chowdhery, P. Mukherjee, B. Lall - *Poster: DRIZY: Collaborative Driver Assistance Over Wireless Networks*
In Proceedings of the 23rd Annual International Conference on Mobile Computing and Networking (MobiCom '17). Association for Computing Machinery, New York, NY, USA, 546–548.
DOI: https://doi.org/10.1145/3117811.3131255 [pdf] [poster]

• ***Conference Paper (Paper ID: 2738)***
I. Janveja, N.Garg, **C. Chawla**, J. Parikh - *Aquacom: Underwater Visible Light Communication*
Proceedings of the 12th INDIACom; INDIACom-2018; IEEE Conference ID: 42835 [pdf]

PROJECTS

- Identifying stellar cluster memberships using Gaia In Progress
- GaiaCurves: An open-source package for fetching & analyzing Gaia lightcurves Jun'21
- Intro2Astro Proposal: Exoplanet Transit Classification using Recurrent Neural Nets Jun'20
- Multispectral crop analysis and drone navigation [Report, Code1, Code2] Mar'19
- Synchronous path planning and coordinated task execution for dummy Mars rovers Mar'17

COURSES, WORKSHOPS, and CONFERENCES

- **Relevant Undergraduate Courses**: • Applied Physics (I & II) • Applied Mathematics (I, II, III, & IV) • Electromagnetic Field Theory • Digital Signal Processing • Introduction to Programming • Optoelectronics and Optical Communication • Analog Electronics (I & II)
- **Post-baccalaureate Courses**: • Introduction to Astronomy Research 2020 • Astronomy: Exploring Time and Space (University of Arizona - Coursera) • Data-Driven Astronomy (University of Sydney - Coursera) • Code/Astro 2021 (Caltech) • Astrosprint 2021 (MANUU, India)
- **Workshops**: • Sagan Exoplanet Summer Workshop on Circumstellar Disks & Young Planets (NExSCI, 2021) • XMM-Newton Science Workshop, 2021 • ALMA Radio Interferometry Cycle8
- **Conferences Attended**: • TESS Science Conference II 2021 • PLATO Mission Conference 2021 • Spatially Resolved Spectroscopy with ELT 2021 (Oxford) • Emerging Researchers in Exoplanet Science, ERES 2021 • Extragalactic Spectroscopic Surveys, GALSPEC 2021 • Cool Stars 20.5 • Gravitational Wave Multi-Messenger Astronomy 2021 (CNRS, France)
- **Symposia**: • STScI Spring Symposium 2021 • Stars and Planets in the UV, SPUV 2021

VOLUNTEERING & OUTREACH

2021	Mentor at Intro-to-Astro 2021 summer course by Howard Isaacson, Research Scientist at UC-Berkeley and Dr. Fei Dai, Postdoctoral fellow at Caltech
2021	Mentor at Astrosprint 2021 Astronomy and Astrophysics course led by Prof. Priya Hasan and Prof. S.N. Hasan (Delivered session on Git/GitHub)
2020, 2021	Co-organizer at NumFocus: PyData Delhi, Core team member, PyData Global
2019	Delivered Machine and Deep Learning workshop series at BVCOE for 60+ students
2017-2019	Vice Chairperson, BVP IEEE Technical Society - Delivered several talks & hands-on sessions, Chaired and Founded Innovicon Conference and All-Women Hackathon WIEHack, headed Eta Kappa Nu and Robotics and Automation Society

TECHNICAL SKILLS

Proficient: Python, SQL/ADQL, C, Unix Shell Scripting, LaTeX, Git, Topcat

Working knowledge: HTML, MATLAB, Lua, Tableau, C++, Android (XML and Java)

Python Libraries: MoonPy, astropy, wōtan, transitleastsquares, matplotlib, pandas, numpy, radvel, lightkurve, scipy, jupyter, pyMC, tensorflow, keras, openCV

Key Technologies: Astronomy, Machine Learning, Data Analysis, Signal Processing, Robotics