

VISHNU SAMPATHKUMAR

Neuroscientist | Linguist

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📍 577B, Koramangala, Bengaluru, India

Researcher with research interests in neuroscience, computer science, theoretical math and linguistics. Extensive experience with programming (Python, Java) and neurological softwares (FreeSurfer, FSL). Has experience with technical writing and research presentation as well.

EDUCATION

- 2022 **High School Diploma (Physics, Chemistry, Mathematics, Biology)** from National Public School, Indiranagar.
- 2021 **Research Scholar (Graph Theory)**, Pioneer Academics.
- 2020 **Summer Research Fellow (Neuroscience Research Institute)**, Research Mentorship Program (RMP), UCSB.

EXPERIENCE

- Present**
August 2019 | **Research Scientist, DEPARTMENT OF NEUROIMAGING, NIMHANS,**
 - C11-MET based brain tumor texture analysis with machine learning.
 - ROI analysis in PET-MR Temporal Lobe Epilepsy (TLE) scans.
 - Reviewed rare, on-site produced radiotracers like C11-MET, F18-FET and common radiotracers such as F18-FDG

Osirix PiMOD FreeSurfer Python
- Present**
November 2019 | **Research Fellow and Mentor, CENTRE FOR FUNDAMENTAL RESEARCH AND CREATIVE EDUCATION (CFRCE),**
Conducted research on connectomics and neural connectivity | mentored high-school freshmen and sophomores on advanced math and neuroscience concepts.
 - Wrote meta-analysis paper : "The Limited Spread of Progressive Neuronal Damage from Cortex to Subcortical Regions : a Meta-Analysis"

FSL Java CSS EyeWire
- July 2021**
September 2021 | **Research Fellow, YERGER GROUP, Pioneer Academics**
Studied random graph generation models and the evolution of their parameters during graph growth. Intensively studied and wrote paper on the Barabasi-Albert model and the repercussions the 'rich-get-richer' hub-growth had on the graph's chromatic (color) number.

GraphPad NetworkX Gephi
- June 2020**
August 2020 | **Research Fellow , DOYLE GROUP, Research Mentorship Program**
Used transcriptomics tools to study RNA expression patterns in embryonic stem cells (mESC) derived motor neurons. Tracked expression over a seven day period to identify ALS-causing mutations. Published my findings in a research paper.

Matplotlib DAVID TAC MATLAB

OUTREACH AND VOLUNTEERING

- Present**
June 2019 | **Co-Founder, Director, POWSHTIK BURFI,**
 - Worked with local slum dwellers in Rajendranagar, Bangalore, to study the extent of malnutrition in children.
 - Formulated a simple and cost effective Ready-to-Use Therapeutic Food (RUTF) to fulfil the daily nutritional requirement of the malnourished children.
 - Helped 400+ children and endorsed by Akshaya Patra

powshtikburfi.com

Present June 2020	School Prefect, NATIONAL PUBLIC SCHOOL, INDIRANAGAR, Co-ordinated workings of school council and participation in inter-school competitions and fests. Campaigned for mental health awareness in the school. <ul style="list-style-type: none"> > Developed an anti-bullying initiative in school – Student Organization for Support (SOS) – which organizes guest lectures and carries out support meetings to increase awareness about bullying and its types
March 2020 June 2019	Director and President, QUIZ CLUB, National Public School, Indiranagar Directed activities of the school quiz club, and headed the school quiz bowl team.

SCORES

ACT (Standardized Testing)	35/36 (composite)
PSAT (Standardized Testing)	1470/1520
AISSE (10th Grade Board Exam)	491/500 School Topper (Valedictorian)
AISSCE (12th Grade Predictions)	486/500
RMP Final GPA	4.0
Pioneer Academics Grade	A

AWARDS

Grand Award	International Science and Engineering Fair (ISEF) 2021
Team India	International Science and Engineering Fair (ISEF) 2021
Grand Award	IRIS National Fair 2021
Team India (Substitute)	International Linguistics Olympiad 2021
Bronze Medal	National Round of International Linguistics Olympiad (India Chapter) 2021
Honorable Mention	National Round of International Linguistics Olympiad (India Chapter) 2019, 2020
Winner	Wissen Quiz (National level) 2019
Winner	Hindu Young World Quiz (State Level) 2015, 2017, 2018, 2019

</> PROGRAMMING LANGUAGES

Python	● ● ● ● ●
Java	● ● ● ● ●
HTML/CSS	● ● ● ● ○

💡 NON-ACADEMIC INTERESTS

CARNATIC VOCAL :	Learning from Sri G Ravi Kiran
TABLA :	Learnt from Sri Dilip Puranik