VIGHNESH HEMNANI

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education

Rutgers University, New Brunswick NJ, USA
*Bachelors of Science in **Computer Science** and **Mathematics*** | **GPA:** 3.70/4.00

Mercedes-Benz International School (MBIS), Pune, MH, India
International Baccalaureate (IB) Diploma | **Total:** 39/45 (top 10% in the world)

personal projects

Bar-Beer-Drinker Project, Prin. of Info. & Data Mgt.   *Oct '20 – Nov '20*
New Brunswick, NJ, U.S

- Developed a web application on a **Tomcat localhost server** using **HTML, CSS and Javascript** that shows tabular & graphical insights on a given bar, beer or drinker using queries from a **MySQL database**
- Accommodated a user-friendly error-prompt when a user to decides to **modify (insert/update) the database** from the web application allowing the database to be changed dynamically as user deems fit

Research Paper on Laplace Equations, IB DP Extended Essay.   *Mar '17 – Jan '18*
Pune, MH, India

- Wrote an in-depth 4,000 word **Harvard-cited research paper** in Mathematics as a part of IB DP Extended Essay program.
- Analysed the difference between **solving second-order differential equations** using **Laplace Transforms** vs. **traditional methods**, in the context of a displacement model of a parachutist

Diamond Challenge Business Concept Competition: *Sept '16 – Dec '17*
Potentia Fitness App, University of Delaware, United States

- Participated in a group of four to collaborate and make a business concept - a 'gamified' fitness app, Potentia, that offered challenges, 'fuel' points & levels to attract young-adult users
- Collaborated in a group that held **regular weekly meetings** to discuss and work on the fitness app
- Developed a dynamic wireframe and then a prototype of the fitness app using **InVision and Figma**
- Selected among 700 applications **worldwide** to present a pitch to established judges & finally be in the **top 5 in the world**

job/leadership experiences

*Freelance Maths Tutor***, Online and Independent**   *Mar '20 – Current*

- Employed **word-of-mouth advertising and online posts on Reddit and Discord forums** to reach out to high school and college-level students for Maths tutoring of any discipline (Algebra, Calculus, Linear Alg)
- Provided **reliable, on-time and online tutoring over Zoom** to 8 students ranging from middle to college students on Algebra, Geometry, Calc 1, Calc 2, and Linear Algebra
- All students passed and **large majority jumped from a failing/borderline grade to a B+/A** by the end of the semester.
- One student rose from having a mediocre grade to being able to show thorough and remarkable mathematical and analytical skills, which **resulted in a Lab Research Assistantship position at UofSC**

Consultant, **Office of Information Technology,** New Brunswick, NJ   *Aug '19 – Current*

- Responsible for the maintenance of the IT labs, gathering hourly statistics, diagnosing and solving network issues, and effectively handling unfamiliar and unusual situations to **help patrons with their technological issues (such as issues with Microsoft Office or Adobe Creative Suite)**
- Apply **interpersonal skills**, such as clear communication, active listening, and problem-solving to develop rapport with patrons and troubleshoot problems with **university printing, hardware/software, and SSO services** both in person and on call.

Mathematics Teacher, **Santulan NGO,** Pune, Maharashtra, India   *Sept '15 – Jan '18*

- Volunteered to be a 10th grade **Mathematics teacher** for 7 students for an NGO that strives towards the empowerment of children whose parents are from socio-economically marginalized communities
- Planned and organized lesson plans with questions of adequate difficulty to ensure the students maximize their learning
- Guided and taught the students a challenging syllabus for two years of two different batches, of which all **students in both batches passed with distinction**

skills

Programs

MS Office Suite, Google (Suite Business and Analytics), Adobe Creative Suite, Figma, Invision, WordPress, Wix

Coding Languages

C, Java, Python, Maple, HTML & CSS, MySQL, MATLAB, R, Latex, Markdown, JSON

Operating Systems

MacOS, Windows and Linux

Langauges

English, French, Mandarin, Hindi, Gujurati, Marathi, Urdu

courses

Calculus I, II, III, IV, V

Data Structures

Linear Algebra

Discrete Struct. I & II

Computer Architecture

Prin. of Data Mgt.

Design and Analysis of Algo.

Data Mgt. for Data Science

Numerical Analysis