Jaskirat Billing

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EDUCATION:

University of California, Berkeley **Berkeley, CA**
Neuroscience BA *August 2023 - Present*

- GPA: 3.8/4.0
- **Coursework:** Structure & Interpretation of Computer Programs, Scientific Logic & Communication, Linear Algebra, Organic Chemistry I & Lab, Biology & Lab, General Chemistry & Lab, Calculus I & II, Physics I and II

River Valley High School **Yuba City, CA**
High School Diploma *August 2019 - May 2023*

- GPA: 4.65 (UW GPA: 4.0/4.0)
- *Class of 2023 Salutatorian*
- **Coursework:** AP Calculus BC, AP Computer Science, AP Physics

Yuba College (Dual Enrollment Degree)
Social & Behavioral Science AS

- GPA: 4.0/4.0
- **Coursework:** Biology, Statistics, Medical Terminology, Psychology, Economics

PROJECTS:

SimpleFlow
Neurotech NVIDIA Hackathon (*2nd place*)

- Participated in a 2-day hackathon where our team leveraged an OpenBCI EEG Headset connected to an 8-channel OpenBCI cyton board to capture electrical activity of a participant.
- Utilized advanced algorithms to calculate phase coherence between auditory stimuli and beta waves to infer auditory attention of students attending lectures remotely.
- Developed a GUI using JavaScript to display correlation between auditory and EEG signals, enabling educators to visually access students' engagement during the lecture.

EXPERIENCE:

Software Developer **Berkeley, CA**
Neurotech@Berkeley *January 2025 - Present*

- Building a U-Net segmentation model to detect and localize brain tumors from 3D MRI scans; focusing on preprocessing, training, and evaluation using medical imaging datasets.
- Attend weekly workshops and talks on current developments in neurotech and computational methods.

Sikh History Teacher **Yuba City, CA**
Sikh Community Center *August 2022 - May 2023*

- Lectured a class of students aged 11-17 on Sikh History; researched content and administered exams.
- Mentored middle and high schoolers on academics, extracurriculars and school life.

TECHNICAL SKILLS:

Programming: Python, MATLAB, JavaScript, HTML5/CSS3
Libraries/Frameworks: SciPy, NumPy, Pandas, Matplotlib
Hardware: OpenBCI Cyton, OpenBCI UltraCortex mIV, Arduino UNO, PC Diagnostic and Repair.
Laboratory Procedures: PCR, SDS-Page, Chromatography, Spectroscopy, Filtration & Extraction, Recrystallization