Vivek Mohan

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Education

BITS Pilani University (CGPA: 7.11/10.00) **Nov. 2020 – June 2024**
B.E (Hon.) in Electrical and Electronics Engineering *Goa, India*

PACE Junior Science College (Grade: 89.54%) **June. 2018 – June 2020**
12th Grade and Equivalent *Mumbai, India*

Projects

Arco Signal Processing Server | *C++, FAUST* **June, 2024**

- Developed a guitar effects chain that included gain, modulation and time-based effects like Wah, Overdrive, Phaser, Flanger, Delay and Reverb.
- Worked on resolving compatibility issues of Arco and Serpent source code, while building it on the Windows OS.
- Converted the Faust code to C++, debugged the code and seamlessly integrated it into Arco.

Communication System Implementation | *MATLAB, Simulink* **January, 2024**

- Utilized Matlab and Simulink to design and implement signal processing models for communication on a Raspberry Pi.
- Created a lab setup for real time communication of signals via LAN and to display the output on a DSO.
- Resolved previous issues related to datatype compatibility and hardware, ensuring smooth end to end communication.

Hybrid Time-Frequency Representation | *MATLAB* **January, 2024**

- Explored a time-frequency representation technique to analyse non-stationary signals by combining the Wigner-Ville Distribution and Fourier-Bessel Coefficients.
- Integrated Fourier-Bessel coefficients into WVD computation to reduce cross terms in Time-Frequency representation.
- Tested the WVD with different types of signal and noise conditions.

Experience

Unity Growth Fund **July, 2023 – December, 2023**
Market Research Intern *Delaware, USA*

- Conducted market research on fast-growing pre-IPO AI companies and their competitors for fundamental analysis.
- Prepared detailed investor decks using Figma, with key insights, financial projections, and investment opportunities.
- Improved the user guide for the Unity Growth Fund Portal by incorporating images, GIFs, AI presenters and videos edited using Adobe Premiere Pro.

CSIR-CSIO **June, 2022 – August, 2022**
Research Intern *Chandigarh, India*

- Developed a system to measure flashing mode intensity of LEDs in anti-collision lighting systems for airplanes.
- Employed MATLAB for plotting intensity data and comparing the spectral properties of LEDs with incandescent bulbs.

Technical Skills

Programming Languages: Python, FAUST, C++, C, Java, HTML, CSS, JavaScript
Developer Tools: VS Code, Jupyter Notebooks, GitHub, Eclipse
Technologies/Frameworks: FL Studio, Audacity, Adobe Premiere Pro, Figma

Extracurricular

Cultural Activities **Jan. 2021 – May, 2024**
Performing Clubs *BITS Pilani*

- **Sub-Coordinator, Synchronoise**: Arranged elaborate A Capella covers, performed at multiple college venues and organised the first edition of the club's flagship event.
- **Pianist and Vocalist, The Music Society**: Stood second in Taringini, a Battle of Bands organised by Festember, NIT Trichy and performed at multiple college venues.
- **Actor, The Drama Club**: Performed in an adaptation of John Cariani's production, Almost Maine.

Languages

English, Hindi: Native or Bilingual Proficiency
Tamil, Malayalam: Full Working Proficiency
Spanish: Limited Working Proficiency