DIVYA DEODAS PRABHU

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EDUCATION

University of California, San Diego, USA **Sep 2023 – Aug 2025 (expected)**
Master of Science in Bioengineering
Relevant Coursework: Biochemistry, Cell and Molecular Biology, Stem Cell Biology, Biomechanics, Patient-Centered Clinical Medicine for Bioengineers, Tissue Engineering and Regenerative Medicine

University of Mumbai, India **Aug 2016 – Oct 2020**
Bachelor of Engineering in Biomedical
Relevant Coursework: Signals and Control Systems, Medical Imaging, Hospital Management, Biomaterials, Advanced Image Processing

EXPERIENCE

Research Associate – Kravets Lab, University of California, San Diego, USA **Apr 2024 – Present**
- Investigated beta-cell subpopulations in T2D using FLIM, FRAP, and live-cell calcium imaging to reveal insulin secretion heterogeneity.
- Analyzed immunoendocrine mechanisms in T1D via 4D confocal microscopy and network analysis, identifying novel intervention targets.
- Standardized imaging workflows across 20+ islets and 50+ pancreatic tissue slices, enhancing reproducibility.
- Addressed inefficiencies in calcium imaging analysis by creating a signal processing framework in MATLAB/ImageJ, enhancing the precision of spatial correlation metrics.

Research Associate – Cheresh Lab, University of California, San Diego, USA **Jan 2024 – Mar 2024**
- Explored LPAR4 and fibronectin roles in pancreatic cancer progression utilizing flow cytometry and western blotting.
- Designed tumor–fibroblast co-culture experiments with siRNA knockdowns and immunofluorescence imaging.
- Conducted in vivo mouse model studies with AFM and IHC to assess cancer-associated fibroblast impact on tumor microenvironments.

Product Manager – Krishagni Solutions Private Limited, Mumbai, India **Jul 2020 – Aug 2023**
- Managed 20+ global biomedical research projects, delivering customized software solutions for cancer and COVID-19 studies.
- Identified workflow inefficiencies in biospecimen tracking and led the design of 30+ automation solutions, increasing operational efficiency by 75%.
- Solved visibility issues in lab operations by building JIRA-based dashboards, enabling real-time decision-making and improved research efficiency.
- Led 50+ training sessions on OpenSpecimen (LIMS), increasing user adoption and regulatory compliance.

Research Intern – Center for Innovation and Bio-Design (CIBioD), Chandigarh, India **Jun 2020 – Jul 2020**
- Enhanced production workflows for diabetes-related devices, improving efficiency and product quality.
- Tackled inaccuracies in diabetes diagnosis by applying machine learning models, boosting prediction accuracy by 50%.

Biomedical Engineering Intern – Holy Family Hospital, Mumbai, India **Dec 2018 – Jan 2019**
- Supported medical device maintenance and calibration across ICU and radiology units, ensuring 100% compliance with safety regulations.
- Applied LabVIEW and Minitab for device validation, DOE, and MSA, improving clinical device performance and documentation.

SKILLS

- **Laboratory Techniques**: Flow Cytometry (FACS), ELISA, qPCR, RT-PCR, Western Blotting, Mammalian Cell Culture, Immunofluorescence, Live-cell Imaging, PBMC and Primary Cell Isolation, Islet Biology, NGS Assays, In Vivo Research, AFM, DNA and RNA Extraction, Plasmid Isolation, iPSC-Derived Models, Mouse Models, Aseptic Lab Techniques, IHC

- **Bioinformatics, Imaging and Computational Modeling**: FLIM, FRAP, Calcium Imaging, ImageJ, Imaris, MATLAB, Python, GraphPad Prism, Spatial Data Analysis, AutoCAD, SolidWorks, Blender, Leica LAS X, BioTek Cytation Imager, Minitab, SimBiology, FlowJo, Microsoft Office (Excel, Word, PowerPoint, Project – Advanced), DOE, MSA, Power BI, MySQL, FFT Analysis, LIMS, ELN, LabVIEW

- **Product and Workflow Management**: JIRA, Atlassian Suite (Confluence, Kanban Boards), Workflow Automation, GMP Compliance, FDA Standards, Agile Project Management, Regulatory Documentation, Clinical Research Operations, Google Suite