

# SUGAM BUDHRAJA

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## OBJECTIVE

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PhD-trained Machine Learning Researcher and Engineer with experience building real-time, multimodal, explainable AI systems and deploying them across mobile, cloud, and research settings. Seeking full-time or contract opportunities to build and apply AI in impactful, human-centered applications.

## EDUCATION

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**Ph.D. Data Science**, Auckland University of Technology 2021 - 2025

Thesis: Multimodal, Explainable and Personalised AI in Mental Health (5 Publications, 8 Conferences)

Funding: \$3M MBIE Catalyst NZ-SG Data Science Grant

Teaching Assistant for Algorithm Design and Analysis; Research Assistant for Tinnitus Therapy Response Prediction

**B.E. Computer Science**, BITS Pilani 2016 - 2020

Thesis: Sleep Stage Classification from EEG data using Spiking Neural Networks (1 Publication)

Teaching Assistant for Machine Learning, Database Systems, and Discrete Structures

## SKILLS

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<b>Core Expertise</b>	Machine Learning, Deep Learning, Time Series Modeling, Multimodal Learning
<b>ML Tools &amp; Frameworks</b>	PyTorch, TensorFlow, scikit-learn, NumPy, pandas, seaborn, Databricks, DBT
<b>Software Development</b>	AWS (Redshift, RDS, EC2, S3), PostgreSQL, Git, Flask, React.js, Spring Boot
<b>Programming Languages</b>	Python, Java, C++, SQL
<b>Soft Skills</b>	Technical Leadership, Cross-functional Collaboration, Problem-solving, Scientific Writing, Adaptability, Teamwork

## EXPERIENCE

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**Head of Data Science** Mar 2023 – Present  
[Sahha](#) *Auckland, NZ*

- Led the product strategy and development of Sahha's real-time health analytics engine, deploying explainable phone-derived models of health and wellness, architecting the scalable streaming data pipeline, and driving enterprise PoCs with major customers.

**Machine Learning Engineer** Jun 2021 - Feb 2022  
[EyeInc](#) *Auckland, NZ*

- Fine-tuned Google's GazeNet model for mobile eye-tracking, reducing gaze error to  $\approx 1.5^\circ$ , and deployed it in edge devices, enabling real-time attention analysis at 100x lower cost than clinical devices.

**Full Stack Intern** May 2019 - Jul 2019  
[Intuit](#) *Bengaluru, IN*

- Built a graph database-based backend system on AWS Neptune with REST APIs for tracking of service-to-service interactions, alongside a front-end visualization app for real-time graph insights.

**Data Science Intern** May 2018 – Jul 2018  
[Reliance Jio](#) *Navi Mumbai, IN*

- Developed a facial recognition system using ensemble of FaceNet, Dlib, and DeepFace. Built a spoof detection layer by transfer learning AlexNet. Achieved 6ms inference time for secure access control.

## SELECTED PROJECT

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**Tinnitus Therapy Response Prediction.** Developed MDFNet, a novel multi-domain neural network integrating time, frequency, and connectivity EEG features; high accuracy for predicting tinnitus response, co-authored a publication.