





**Jugraunaq Singh**  
Bachelor of Technology  
Computer Science and Engineering  
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## EDUCATION

Degree/Certificate	Institute	CGPA/Percentage	Year
B.Tech., CSE	Vellore Institute of Technology, Vellore	9.12	2022-Present
Senior Secondary	DPS RK Puram, Delhi	93	2022
Secondary	DPS Indirapuram, Ghaziabad	93	2020


## INTERNSHIPS

- **Josh Talks ** — **Industry Landscaping to Build Customised Speech Data Offerings for Enterprise LLMs**  
*AI Market Research Intern* July 2024 - August 2024
  - Identified 30+ enterprises with advanced LLMs leveraging speech data for training multilingual models
  - Evaluated performance of identified LLMs across 11 benchmarks to scope use cases of speech datasets
  - Built 2 customized speech data offerings, conceptualized and initiated adoption plan with 5 enterprises
- **AI Ensured ** — **Enhanced GANs for Accurate Data Generation and Production-Grade Refinement**  
*Machine Learning Intern* May 2024 - July 2024
  - Tuned the generator model by modifying learning parameters and implementing CTGAN architecture
  - Adjusted learning rate, optimiser parameters, gradient penalty & Wasserstein loss across multiple iterations
  - Reduced MSE by 2.85%, MAE by 7.59%, and accelerated model convergence and sample diversity by 10%

## PROJECTS

- **BCG Churn Analysis: Data-Driven Churn Prediction and Retention Model for Business Growth**  
*Tools: Python, Pandas, NumPy, Scikit-Learn, Matplotlib, Seaborn, Jupyter Notebook, SciPy, Git* 
  - Developed pipeline integrating EDA, feature engineering and predictive modeling to detect high risk churn
  - Refined data with cleaning and normalization, engineered features with 15% variance and 30% SNR boost
  - Achieved 92% model accuracy, reduced false positive by 12%, informed strategies for 18% retention boost.
- **Saphina: AI-Powered medical chatbot for accessible, affordable and real time preliminary diagnosis**  
*Tools: Python, Transformers, NLTK, ResNet-18, Pytorch, FastAPI, MongoDB, Docker* 
  - Developed multimodal chatbot integrating Bio-ClinicalBERT, ResNet-18, LangChain, FAISS & MongoDB
  - Designed Hierarchical query routing using LangChain and tuned ResNet-18 by freezing pre-trained layers
  - Enhanced diagnostic accuracy by 15%, reduced inference latency by 30%, processed 50+ queries/second
- **Pro Blaze: AI-Powered Protein Folding Prediction Model For Efficient Structure Determination**  
*Tools: Python, OpenAI Gym, Biopython, NumPy, Proximal Policy Optimization, Matplotlib* 
  - Developed AI protein folding prediction using DP minimization, RL simulation and motif detection
  - Computed 570K sequences, computed DP energy, trained RL folding predictor, identified binding site
  - Achieved 20% improved RMSD, 20% lower energy than conventional RL, improved detection accuracy

## PUBLICATIONS

- **Growth Of Quantitative Finance And Algorithmic Trading** June 2024   
Conducted Primary and Secondary data analysis using Regression and Correlation techniques
- **Fintech and Adoption of Fintech in India - A Study** March 2024   
Performed in-depth landscaping of Indian Fintech Industry under Dr. Shahrukh Saleem

## SKILLS

- **Programming Languages:** Java, Python, C, C++, R, JavaScript, SQL, JDBC, NumPy, Pandas
- **Technologies:** Pytorch, TensorFlow, Scikit-learn, ResNet, FastAPI, Flask, Bootstrap, React.js, Node.js
- **Tools:** MongoDB, Docker, Git, Jupyter, Power BI, Postman, Google Colab, Excel, AWS, SQL+

## PORS AND ACHIEVEMENTS

- **Senior Core AI-ML**, Team Prometheus VIT (RoboCup), **Senior Core**, IEEE-CSE, VIT
- **3<sup>rd</sup> Position** - Subway Cyphers Coding Competition, Gravitas VIT Vellore
- **Silver Medalist** (Certificate of Academic Merit) DPS RK Puram