Darrin Bright

Generative AI | Deep Learning | Software Engineering

+91 95666 35820 darriebright@gmail.com LinkedIn GitHub

Education

Vellore Institute of Technology (VIT) **CGPA: 8.99** Vellore, India

Integrated Master of Technology in Software Engineering *2022-2027*

- **Relevant Coursework**: Artificial Intelligence (AI), Machine Learning (ML), Natural Language Processing, Data Mining, Computer Networks, Data Structures and Algorithms, Database Management Systems, Operating Systems, Python Programming, Object Oriented Programming

Chettinad Vidyashram, Chennai **Grade: 90.6%** Chennai, India

AISSCE Class 12 *2008-2021*

- **Achievements**: General Proficiency (GP)- 2012 and 2013

Experience

Astute Vellore, India

Project Manager & Technical Lead- Intern *October 2024 - Present*

- Leading the design and development of BloggerAI, an AI model designed to generate SEO-optimized blog content.
- Currently integrating user-provided product details with Google Trends to extract relevant trending keywords based on various factors such as search volume and interest over time.
- Extracted keywords will then be fed to an LLM to generate SEO-optimized blogs to boost the website traffic and content visibility.

Generative AI & ML Engineer- Intern *July 2024 - October 2024*

- Developed *BloggerAI* model which is an AI model leveraging Gemini backbone designed to generate relevant blogs from product information for small-scale and rural manufacturers or business owners.
- Developed *Pixel Charm* model, leveraging Mask R-CNN and the Segment Anything (SAM) model for accurate background removal, producing professional-quality product images.
- Developed *Social Spark* model, an automated system for video advertisements and social media poster generation, combining Stable Diffusion for poster design and Gemini for tagline creation with optimized tagline placement.

Vicuna Kouture Vellore, India

AI Specialist- Intern *July 2024 - August 2024*

- Experimented with various text-to-image diffusion models to generate unique t-shirt designs, achieving optimal results with Stable Diffusion model.
- Performed extensive prompt engineering to refine and identify the most effective prompts for generating visually appealing outputs.
- Collaborated with the back-end team to integrate the AI model using FASTAPI, ensuring smooth deployment.

IEEE Robotics and Automation Society Vellore, India

Chairperson *December 2024 - Present*

- Managing a chapter of over 150 students, organizing hackathons, workshops, and tech talks to inspire learning in robotics and automation.
- Mentored a team of juniors by conducting sessions on ML and Generative AI frameworks like LangChain to enhance their skills and knowledge in the field of AI and automation.

Technical Projects

Quest2Clip December 2024 - Present

GitHub Link

- Developing an interactive video response system to deliver concise summaries of complex topics through engaging multimedia presentations.
- Leveraging *Gemini Pro* for generating topic summaries and *Google Text-to-Speech* to convert scripts into audio.
- Employing *Whisper* model for accurate captioning and integrating *Pexels* API to source relevant visual content.
- Using *MoviePy* to seamlessly combine audio, video, and captions into cohesive outputs.

Smart Farming with Deep Learning December 2024 - Present

GitHub Link

- Developing an agricultural system to collect soil parameters and plant images for yield production, crop disease identification, crop recommendations, and market price forecasting.
- Integrating LLMs to analyze predictive outputs and deliver actionable insights, enabling farmers with tailored recommendations for improved decision-making in agricultural practices.

Hybrid Neural Network for Stock Prediction October 2024

GitHub Link

- Developed a hybrid stock prediction model combining Long Short-Term Memory (LSTM) network for capturing temporal dependencies and Multi-Layer Perceptrons (MLP) for non-linear feature extraction.
- Achieved a **55.66% reduction** in Mean Squared Error (MSE) and a **38.65% decrease** in Mean Absolute Error (MAE) by integrating MLP with LSTM, resulting in a significant increase in accuracy.

PDF Question Answering System using RAG September 2024

GitHub Link

- Developed a PDF-Question Answering (QA) system utilizing Retrieval-Augmented Generation (RAG) to extract, chunk, and store document text in a FAISS vector database for efficient semantic search and retrieval.
- Integrated Google Gemini Pro for generating accurate, context-aware responses to queries based on the retrieved document data.

Real-Time Vehicle Detection and Tracking June 2024

GitHub Link

- Developed a real-time robust traffic monitoring solution using computer vision tools.
- Utilized YOLOv5 for vehicle detection and SORT (Simple Online and Realtime Tracking) for multi-object tracking.
- Performed vehicle counting by leveraging SORT's built-in track association mechanism, which uses the Hungarian algorithm for matching detections with existing tracks.

Skills

Languages	Python | C++ | C | SQL | HTML | CSS | JavaScript
Library & Framework	Langchain | TensorFlow | Keras | OpenCV | NumPy | Pandas | Scikit-learn | NLTK | FAISS | Matplotlib | Seaborn
Database	MYSQL | Vector Database
AI/ML Techniques	Supervised Learning | Unsupervised Learning | Artificial Neural Networks | Convolutional Neural Networks | Transformers | Retrieval Augmented Generation | Natural Language Processing | Deep Learning | Large Language Models
Certification	Machine Learning A-Z, Udemy

Honors and Awards

Second Runners up of HackWar Hackathon, *Vellore Institute of Technology, 2025*
Runners up of Startup Demo Day, *Vellore Institute of Technology, 2025*
Winners of Project 2039 Hackathon, *Vellore Institute of Technology, 2024*
Winners of Alphaforge Ideathon, *Vellore Institute of Technology, 2024*
Runners up of Biomimicry Innovation Challenge, *Vellore Institute of Technology, 2024*

Extra-Curricular

Volunteer | **National Service Scheme, NGO**
Engaged with students at government schools and conducted sessions on career opportunities
Volunteer | **Becoming I Foundation, NGO**
Participated in outreach programs, visiting government schools to teach foundational science, math, and english
Prefectorial Body Member | **V-Care Club**
Participated in club activities such as growing plants, organizing newspaper recycling initiatives

Declaration

I, Darrin Bright, hereby affirm that the aforesaid information is true to my knowledge, as of February 3rd, 2025. Certificates are available upon request.