ABHINAV KUMAR NARIYAMPULLY ANILKUMAR

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PROFILE

Aspiring AI/ML Engineer with a strong foundation in machine learning, deep learning and intelligent system design. Skilled in exploring complex datasets, identifying meaningful patterns and applying advanced algorithms to address real-world challenges. Equipped with academic knowledge and hands-on project experience to contribute to the development of scalable AI solutions that bridge the gap between research and practical applications. Eager to grow expertise while adding value to innovative teams and impactful projects in Artificial Intelligence and Machine Learning.

PROFESSIONAL SUMMARY

- **Programming Languages & Profiles:** Python, C, C++, Java, JavaScript, LeetCode, CodeChef, HackerRank
- **Core CS:** Data Structures & Algorithms, Object Oriented Programming, Operating System, Database Management System, Computer Networks, Software Development Life Cycle
- **AI & Machine Learning:** RAG, Supervised/Unsupervised Learning, Feature Engineering, Model Training & Evaluation, Regression, Classification, Clustering, Dimensionality Reduction, EDA, Data Visualization
- **Frameworks & Tools:** TensorFlow, PyTorch, Scikit-Learn, NumPy, Pandas, Matplotlib, Seaborn, Streamlit, Node.js, React, Express.js, Tailwind CSS, Bootstrap, Git, GitHub, Jupyter, Pinecone, LLM, Whisper, Docker
- **Software Practices:** Agile, Modular Development, Testing & Debugging, Code Optimization, Documentation

PROFESSIONAL EXPERIENCE

Internships

Coincent   **October, 2022 - December, 2022**
Machine Learning Intern   *India*

- Developed and deployed a CNN-based autonomous driving model achieving **94% steering prediction accuracy** on a dataset of **45,000 labeled images**
- Built a real-time neural network that predicted steering angles with **<0.2s latency** and **over 90% directional accuracy**, facilitating smooth autonomous navigation in diverse road conditions
- Created a demonstration video showcasing the model's **consistent steering precision across 5+ simulated driving environments**, communicating project results to technical and non-technical audiences

Projects

WhatsApp Chat Analyzer | *NLP, Streamlit, Python, Numpy, Pandas, Neural Network*

- Analysed **50,000+ WhatsApp messages** through in-depth EDA to uncover **key communication patterns** such as sentiment trends and engagement frequency, allowing deeper behavioral insights
- Developed a Bi-LSTM model for sentiment analysis, attaining a 95.15% accuracy, showcasing expertise in advanced machine learning techniques and natural language processing
- Presented research findings at **ICISSC-2023**, gaining **peer recognition** for innovative use of NLP in social communication analysis and expanding project visibility to **100+ academic attendees**

Image Super Resolution for Underwater Imagery | *ESRGAN, Computer Vision, GAN, Tensorflow*

- Architected a Generative Adversarial Network based on the ESRGAN framework to perform 4x image upscaling, significantly enhancing photo-realistic textures and perceptual quality
- Optimized the generator architecture by integrating a Convolutional Block Attention Module (CBAM), improving feature extraction capabilities and boosting PSNR by **0.26** dB and SSIM by **0.013** over the baseline model
- Evaluated model performance on benchmark datasets (UEIBD), demonstrating superior edge retention and artifact reduction compared to standard interpolation methods

Deepfake Detection | *CNN, ResNeXt, TensorFlow*

- Engineered a **ResNeXt-based deep learning model** in TensorFlow that detected deepfake videos with **96% accuracy**, improving automated detection of manipulated media
- Processed **100,000+ video frames** with **data augmentation techniques** to create a balanced training set, enhancing model generalization and reducing overfitting by **18% in validation tests**

- Leveraged **transfer learning and fine-tuning** to improve classification performance, accomplishing **96% precision and 94% recall**, showcasing mastery of CNN architectures for video analysis

EDUCATION

- *MSc FT **Artificial Intelligence** (Pursuing)*   **September, 2025 - September, 2026**
  Queen Mary University of London   *London*
- ***First Class B.Tech** in CSE with a specialization in **AI & ML** (CGPA - 8.41)*   **December, 2021 - May, 2025**
  National Institute of Technology   *India*
- *Senior Secondary **(Grade-XII)** (ISC Board) **(99.50%)***   **April, 2020 - March, 2021**
  Swaraj India Public School   *India*
- *Secondary **(Grade-X)** (ICSE Board) **(97%)***   **April, 2018 - March, 2019**
  Swaraj India Public School   *India*

TRAINING AND CERTIFICATIONS

- **Data Structures & Algorithms** | *Apna College*
- **Full Stack Web Development** | *Apna College*
- **Effective Communication** | *Ankur Warikoo*
- **IELTS** Academic (on 16-06-2024) Overall Band Score **8.0** CEFR Level **C1**

LEADERSHIP EXPERIENCE

- **Vice-President** | **Finance Club, NIT Puducherry**   **July, 2024 - May, 2025**

  Conducted **5+ interactive financial literacy seminars** for **100+ attendees**, strengthening participants' understanding of personal finance and key financial concepts, and receiving positive feedback for clarity and engagement

- **Sports Secretary** | **NIT Puducherry**   **July, 2024 - May, 2025**

  Monitored and managed an **open basketball and beach volleyball tournament with 18 teams**, coordinating logistics, scheduling and promotions, resulting in **high participant engagement and successful event execution**

- **Secretary** | **Coding Club, NIT Puducherry**   **July, 2023 - July, 2024**

  Catalogued an event called Code Hunt engaging **50+ participants** and fostering problem-solving and teamwork skills

- **Assistant Sports Secretary** | **NIT Puducherry**   **July, 2023 - July, 2024**
  Executed University Sports Fest 2024, supporting planning, coordination and smooth event operations

- **School Sports Captain** | **Swaraj India Public School, Kanpur**   **April, 2019 - April, 2020**
  Managed and executed a **school-wide sports fest** for **300+ students**, overseeing event logistics and coordination to ensure smooth operations and high participation

NOTABLE ACHIEVEMENTS

- Secured a global Top 400 ranking in the KaggleX Fellowship Program
- Selected among 8K out of 5 lakh registrants and advanced through Round 1.1 of Flipkart GriD 6.0 – Software Development Track
- Chosen as one of the top 25 teams in college to compete in the Smart India Hackathon
- Attained the 2nd position nationwide in the ISC (Class XII) board exams
- Earned the 2nd position school-wide in the ICSE (Class X) board exams