B. H. V. S. P. Subrahmanyam

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Profile

AI researcher, software engineer, and entrepreneur working across generative AI, clinical NLP, multimodal learning, and agentic systems. Co-founder and CTO of Magnocode Tech Private Limited, with experience in product strategy, full-stack engineering, cloud architecture, and commercial software delivery.

Education

Central University of Haryana, Mahendergarh 2021 – 2025
B.Tech. in Computer Science and Engineering *CGPA: 7.96*

Academic work combined software projects with conference and journal research.

Coursework: Cloud Computing; Machine Learning; Data Mining; Python Programming; Database Management Systems; Object-Oriented Programming using C++; Analysis and Design of Algorithms; Data Structures and Algorithms.

Indian Institute of Technology Madras 2022 – 2025
Diploma in Programming *CGPA: 7.16*

Coursework: Machine Learning Foundation, Techniques and Practice; Tools in Data Science; Python Data Structures and Algorithms; Modern Application Development I and II; Java; Statistics I and II; Mathematics I and II; Programming using Python; English I and II.

Research Experience

Junior Research Fellow, Mahindra University Oct 2025 – Present
Virginia Tech Collaboration *Hyderabad, India*

Research agentic AI for IoT-based real-time monitoring and smart-grid blackout prediction under **Dr. Neeraj Choudhary**.

Work on large-scale generative AI systems using **NVIDIA DGX** supercomputing infrastructure.

First author of research on evolutionary fitness shaping for safe clinical text generation; co-author of studies in biomedical AI, EEG analysis, multimodal retrieval, and image steganography.

Guide student research teams on computer vision, natural language processing, and agentic AI projects.

Professional Experience

Co-Founder and Chief Technology Officer Jun 2024 – Present
Magnocode Tech Private Limited (DPIIT-Recognized Startup) *Hyderabad, India*

Built and scaled **MagicAstroAI** to **1,000+ users**, generating **1,200+ AI-based charts and reports**.

Independently delivered four client web projects: AeroTrack Solutions, Capiteum Investments, Arghya Solar, and Meridian Data Labs. Generated approximately **$10,000** in combined freelance and product revenue.

Designed frontend and backend architecture, AI workflows, authentication, storage, and edge deployment for production applications.

Led product strategy and deployment planning; hired interns, mentored developers, and secured AWS startup credits.

Journal Publications

Temporal Attention-Based Multimodal Networks for Real-Time Proctoring of Online Examinations
B. H. V. S. P. Subrahmanyam, Krishnakant Sharma, Shivam Saraswat, and Satyam Pandey.
International Journal of Human Computer Interaction and Data Mining, vol. 9, no. 1, pp. 1–4, 2025.

AI based Online Proctoring Remote Monitoring Intruder, Emotion Detection and Distance Estimation
B. H. V. S. P. Subrahmanyam and Chandrasekhar Balabhadrapatruni.
International Journal of Scientific Research in Engineering and Management, vol. 8, no. 8, 2024. DOI: 10.55041/IJSREM36926.

Conference Publications

Generate, Verify and Select: Evolutionary Fitness Shaping for Safe Clinical Text Generation
B. H. V. S. P. Subrahmanyam, Appana Saketh Krishna Rao, Sukriti Tiwari, and Neeraj Choudhary.
IEEE Congress on Evolutionary Computation (CEC), part of IEEE WCCI, 2026. Published.
Study: A generate–verify–select framework uses evolutionary fitness shaping to improve the reliability of generated clinical text.

Continuous Coordinate-Space Diffusion for Probabilistic Cephalometric Landmark Localization
Kushal, Saketh Krishna Rao Appana, **B. H. V. S. P. Subrahmanyam**, and Neeraj Choudhary.
IEEE International Symposium on Computer-Based Medical Systems (CBMS), 2026. Accepted full paper. Conference abstract.
Study: Image-conditioned diffusion predicts landmark coordinates directly. Reported mean radial errors are **0.82 mm on ISBI 2015** and **0.66 mm on ISBI 2023**.

Beyond Heatmaps: Self-Evolving Graph Neural Fields for Robust Cephalometric Landmark Detection
Saketh Krishna Rao Appana, Kushal, **B. H. V. S. P. Subrahmanyam**, Sravanthi Acchugatla, and Neeraj Choudhary.
IEEE International Symposium on Computer-Based Medical Systems (CBMS), 2026. Accepted full paper. Conference abstract.
Study: Combines implicit neural fields, graph attention, and cross-attention for continuous landmark prediction. Reported mean radial errors are **0.98/1.27 mm on ISBI 2015 Test1/Test2** and **0.70 mm on ISBI 2023**.

Subject-Independent ECG Reconstruction from SCG Using Dual-Domain Adversarial ODE Regularization
Ritika Buchupalli, V. V. Lakshmi Vyshali, **B. H. V. S. P. Subrahmanyam**, Sreeja Pamu, Sathwika Alla, Kushal, and Neeraj Choudhary.
IEEE International Conference on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB), 2026.

Anatomical Slot Attention for Cephalometric Landmark Detection
Vijaya Sai Chigurupati, Vedha Srilaxmi Mudhana, Kushal, **B. H. V. S. P. Subrahmanyam**, and Neeraj Choudhary.
IEEE International Conference on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB), 2026.

Multimodal Image Retrieval Through Image-Text Query Fusion Using CLIP
Saketh Krishna Rao Appana, **B. H. V. S. P. Subrahmanyam**, Alok Kumar Kamal, and Neeraj Choudhary.
International Conference on Emerging Techniques in Computational Intelligence (ICETCI), 2026.

MAT-GAN: Adversarial Image Steganography with Secret-Conditioned Generation
Shalini Galingula, Saketh Krishna Rao Appana, **B. H. V. S. P. Subrahmanyam**, Pranav Rajiv Reddy Nam, Neeraj Choudhary, and Alok Kumar Kamal.
International Conference on Emerging Techniques in Computational Intelligence (ICETCI), 2026.

Hard Negative-Aware Fine-Tuning for Multi-Modal Image Retrieval

Saketh Krishna Rao Appana, **B. H. V. S. P. Subrahmanyam**, Jyotsna Pandranki, Neeraj Choudhary, and Alok Kumar Kamal.

International Conference on Emerging Techniques in Computational Intelligence (ICETCI), 2026.

Multi-View Contrastive and Semantically-Aligned EEG Emotion Recognition with Topology and Asymmetry-Aware Adaptation

Sukriti Tiwari, **B. H. V. S. P. Subrahmanyam**, and Nidhi Goyal.

International Conference on Emerging Techniques in Computational Intelligence (ICETCI), 2026.

Workshop Publications

Lost in Visual Translation: A VLM-Assisted Perceptual-Semantic Coherence Framework for EEG-to-Image Reconstruction

Sukriti Tiwari, **B. H. V. S. P. Subrahmanyam**, Nidhi Goyal, and Sai Amrit Patnaik.

IJCAI–ECAI 2026, 5th Workshop on Human Brain and Artificial Intelligence (HBAI). Accepted; ***Best Poster Award****. arXiv:2607.12364; Project resources.*

Study: Uses vision-language model consensus and human validation to evaluate perceptual and semantic coherence across **6,855 EEG-to-image pairs** from ATM, ENIGMA, BrainVis, and DreamDiffusion; distills annotations into the BCI-Coherence Score.

Basilectal-Inspired Health Questions Expose Robustness Gaps in Small Medical QA Models

Saiankit Shankar, **B. H. V. S. P. Subrahmanyam**, and Neeraj Choudhary.

IJCAI–ECAI 2026, Workshop on Foundation Models for Social Good.

Software and Product Projects

MagicAstroAI Website

Built and deployed an AI-powered Vedic astrology application with a custom calculation and charting engine.

Implemented AI reports, horoscope matching, divisional charts, and Dasha Bhuktis in a scalable, cost-conscious cloud architecture.

Adoption: 1,000+ users; 1,200+ AI-based charts and reports.

Stack: Next.js, Cloudflare Workers, Hono, WebAssembly, Firebase, Cloudflare KV, Cloudflare D1.

Full-Stack Household Services App GitHub

Built a service marketplace for administrators, service providers, and customers with JWT-based role access, an admin dashboard, service search, and booking workflows.

Implemented real-time notifications, activity logs, Redis caching, and automated background jobs with Celery.

Stack: Vue.js, Flask, REST APIs, Redis, Celery, JavaScript.

Telegram Financial Markets Bot Telegram

Built a Telegram bot delivering FRED indicators, GIFT Nifty, Moneycontrol indices, currency rates, and metal summaries.

Deployed on Cloudflare Workers with parallel API fetching and KV caching for market-data retrieval.

Stack: JavaScript, Cloudflare Workers, Cloudflare KV, Telegram Bot API, REST APIs (FRED, Moneycontrol, Currency API).

Strawpoll Voting Bot with Tor Support GitHub

Developed Python automation for Strawpoll using Requests, CSRF-token retrieval, Tor-based IP rotation, and randomized submission timing.

Added JSON configuration, retry handling, Tor control through Stem, and request-payload inspection using browser DevTools.

Stack: Python, Requests, Stem, Tor, JSON, regular expressions, REST APIs.

Client Web Projects

AeroTrack Solutions aerotrack.co.in

Delivered the company website presenting aviation tracking and operational visibility solutions.

Capiteum Investments capiteum.in

Delivered the company website presenting its investment business and portfolio.

Arghya Solar arghyasolar.in

Delivered a client website for Arghya Solar.

Meridian Data Labs meridiandatalabs.com

Delivered the company website presenting AI, geospatial, and industrial inspection offerings.

Technical and Creative Skills

Programming languages: Python, JavaScript, TypeScript, Go, C++, C, SQL, Bash, HTML, CSS.

Frameworks and libraries: React, Next.js, Vue.js, Tailwind CSS, shadcn/ui, Flask, Django, Hono, Express.js.

Cloud and infrastructure: Docker, AWS EC2 and S3, Cloudflare Workers, Firebase, Cloudflare KV, Cloudflare D1, NVIDIA DGX.

Data, APIs, and automation: Redis, Celery, WebAssembly, REST APIs, Requests, Stem, Tor, JSON.

Development and writing: Git, Postman, browser DevTools, LaTeX (Overleaf).

Design and media: Adobe Photoshop, Premiere Pro, After Effects, Blender.

Academic Service

Peer Reviewer

EACL 2025; ICASSP 2026; IJCNN 2026; ICIP 2026.

Talks

Technical Talk, Osmania University

Presented the application of AI in syllabus and curriculum development.

Leadership

Design Lead, Google Developers Group Sep 2024 – Dec 2024
Central University of Haryana

Led branding and visual design for developer outreach and event campaigns.

Honors and Awards

Best Poster Award 2026

IJCAI–ECAI HBAI workshop, for the EEG-to-image evaluation paper *Lost in Visual Translation*.

Code Spardha Arc 2

10th position.

NPTEL Silver and Elite Distinction

The Joy of Computing Using Python.

AIU Western Instrumental (Solo)

38th edition: National Bronze Medal and North-Western Zone Silver Medal.

Spandan, Central University of Haryana

Two-time winner at the university's annual festival.

Certifications

Google UI/UX Career Certificate

Design Thinking and Innovation

NPTEL, IIT Bombay.

The Joy of Computing Using Python

NPTEL, IIT Ropar; Silver and Elite distinction.

Piano Certification

Trinity College London.

Vaastu Praveena

Indian Council of Astrological Sciences (ICAS).