Agastya Raj Singh

agsingh@ucsd.edu | San Diego, CA | linkedin.com/in/agastya-raj-singh | github.com/agastyarajsingh

EDUCATION

University of California, San Diego Sep 2022 – Expected Mar 2027

B.S. Mathematics–Computer Science, Minor in Economics

Coursework: Data Analysis & Inferential Statistics, Design & Analysis of Algorithms, Econometrics, Computer Vision & Deep Learning

EXPERIENCE

Co-founder & Head of AI — SkyAI Mar 2026 – Present

India (remote) | AI analytics for SkyJumper trampoline parks

- Co-founded and lead AI development and business strategy for a CCTV intelligence platform, live at the first center and approved for rollout across SkyJumper's 30 centers in 19 cities.
- Coordinate on-site IT staff across 19 cities for installation, and work closely with a core AI and management team of 4–5 people.
- Built the metrics layer turning raw video into per-area headcount, per-party counts and booked-versus-counted reports for branch managers.
- Measured against hand counts: within 2 people on 90% of 205 moments (about 1 person average error), and on 100% of 51 held-back moments at parties of up to 30 guests; flagged 4 of 4 over-booked test parties.
- Designed preregistered evaluations with event-level leakage control and a held-out test set; shipped weekly PDF reporting and insights dashboards.
- Built the business case and commercial proposal, projecting ₹8–20 lakh in recovered revenue per center per year, or ₹2.4–6 crore (~$0.3–0.7M) annually across 30 centers.
- Shipped live party-hall counting, booked-versus-counted checks, over-booking alerts with evidence frames, a reception queue service, a management dashboard and weekly PDF reports; POS integration and staff face recognition in development.

Founding Computer Vision Lead (Intern) — Data Pipelines & Analytics Jan 2025 – Jan 2026

Playar Inc. | San Diego, CA

- Joined at the company's earliest stage as head computer vision engineer, laying the groundwork for proprietary cricket vision software not available on the market, alongside experienced founders and a team of Qualcomm engineers.
- Combined engineering with product and management work, shaping priorities with leadership as the startup grew into an established company.
- Built pipelines processing high-frequency video and tracking data, extracting trajectory and biomechanics features for coach and player dashboards.
- Engineered features correlating body mechanics with performance, lifting edge-case detection reliability ~18%.
- Applied time-series and physics-based modeling to post-contact trajectory estimation at 60 Hz.

Computer Vision Intern (Data Pipelines) Jul 2025 – Sep 2025

Tech Mahindra | Pune, India (part-time)

- Built a pipeline across 100K+ image samples for harvest analytics, reaching 91% mAP and 0.85 IoU on readiness classification.
- Deduplicated counts across sequential data streams, eliminating double-counting in harvest quantification.

Lead Engineer (Intern) — Safety Analytics Jun 2024 – Aug 2024

VertexPlus Technologies Ltd. | Jaipur, India

- One of the lead engineers on factory safety software detecting helmets and safety vests, registering workers and managing in/out times for compliance.
- Software deployed across multiple factories and still in use today; contributed to management and business decisions alongside engineering.
- Developed anomaly detection on continuous video and sensor streams, feeding automated alerting and compliance reporting.
- Tuned models iteratively to reduce false positives in operational reporting.

Peer Educator — Academic Integrity Program Mar 2025 – Present

UCSD Academic Integrity Office | San Diego, CA

- Facilitate group sessions and mentor students through accountability processes, building communication and conflict-resolution skills.

PROJECTS

FinSight — Market Analytics Dashboard Jan 2025 – Present

- Built an equity analytics platform on 9 years of S&P 500 data with 15+ indicators (RSI, MACD, ATR, Bollinger, realized volatility).
- Backtested a momentum and mean-reversion strategy, 2015–2024: CAGR ≈ 14% vs SPY ≈ 11%, Sharpe ≈ 1.3, max drawdown ≈ 18%.

Playar CricketDrop — Net Practice Analytics 2025

- Built a phone-camera tool producing shot-by-shot drop-zone heatmaps and per-session reports; piloted with batting academies.
- Designed the on-court workflow and per-session analytics consumed by coaching staff.

TECHNICAL SKILLS

SQL & Data: PostgreSQL, MySQL, SQLite, ETL pipelines, FastAPI, Jupyter

BI & Viz: Tableau, Power BI, Streamlit, Matplotlib, Seaborn, Plotly, Excel

Programming: Python (Pandas, NumPy, Statsmodels, Scikit-learn), R, C++

Analytics: Statistical Modeling, A/B Testing, Time-Series Analysis, Hypothesis Testing, Regression, KPI Design

ATHLETICS

National-Level Rifle Shooter — Top 10 national prospect; 3× State Champion. Olympic Gold Quest (OGQ) "Project Leap"; $120,000 training scholarship (2018–2020). Assistant Coach, Competitive Shooting Program (2019–2021).