APEKSHIK PANIGRAHI

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Skills

- Programming & Dev: JavaScript | TypeScript | C++ | C | Python | SQL | NoSQL | PostgreSQL | NextJS | React | React-Native | Tailwind CSS | Git | SwiftUI | Unreal Engine 5 | Linux/MacOS/Windows | Ably (Pub/Sub).
- Al and Machine Learning: Deep Learning | RAG Stack | Supervised/Unsupervised Techniques | Large Language Models | PyTorch | Tensorflow | Pandas | NLP | Local LLMs | Model Evaluation Metrics | Data Augmentation.
- Cloud Computing & DevOps: AWS | GCP | Firebase | Google Cloud Run | Kubernetes | CI/CD | Serverless Functions | Cloud Storage | Pinecone | Vector Store | Firestore | Cloud Architecture | Distributed Systems | Frontend | Backend | English, Hindi, Odia All Professional Proficiency or above.

Experience

Human Data Team Lead xAI Aug 2024 - Current

- Led, managed, and mentored over 300 Al Tutors in developing training data for Grok 3, Grok 3.5 and Grok Voice Mode. Played a crucial role in managing and creating efficient human data pipelines to generate large datasets for important features of Grok 3 like DeepSearch and Grok Voice Mode.
- Collaborated closely with engineers and leadership to setup complex data pipelines and guidelines for Al Tutors to efficiently grade and label data points for Grok 3 & 3.5. Effectively acted as a bridge between engineers and Al Tutors, effectively communicating challenges faced by tutors to enhance data pipeline efficiency and quality for Grok 3 and 3.5.

Founding Platform Engineer

Euso Al

Dec 2023 - Aug 2024

- Lead the development and creation of EusoGPT 2.0, an Al-driven Cloud Deployment Engine, enabling seamless cloud infrastructure deployment and reducing
 manual intervention by 95% using AWS, Google Cloud Run, Firebase SQL, Terraform, Python, Quart (Async Flask), NextJS, & Tailwind CSS.
- Backend Infrastructure Manager: Engineered the first version of a robust distributed backend using Python Flask on GCP VMs, translating natural language
 inputs into Terraform code, minimizing deployment errors and expediting provisioning by 7x.
- Backend Serverless Overhaul: Led the transition to Google Cloud Run environment to provide better scalability and availability of serverless architecture, simplifying deployment and management workflows and enabling CI/CD pipeline to reduce operational costs by 5x.
- Advanced Integration with RAG Stack: Enhanced automation pipeline with RAG Stack, integrating Pinecone Vector-store, PostgreSQL for codebase metadata storage, and Neo4j Graph Database achieving a 3x improvement in optimizing data retrieval and storage.
- Frontend and User Experience Enhancements: Overhauled frontend using **NextJS and Tailwind CSS**, deployed on Vercel, improving user navigation speed by 30% and enhancing overall engagement.

iOS (SwiftUI) Mobile Developer

Asterisk Inc.

Dec 2022 - Nov 2023

- Full-Stack iOS App Development: Built a fully functional social media app for iOS using SwiftUI (MVVM architecture), Google Cloud Storage, Firestore, and NodeJS for push notifications. Improved user authentication with Firebase.
- User Engagement Features: Designed and implemented features to enhance user engagement, such as push notifications, real-time updates, and interactive UI components.
- · Performance Optimization: Optimized app performance, reducing load times by 50% and improving overall user satisfaction.

Full-Stack Software Developer Intern

Graco Inc.

May 2023 - Sep 2023

- Leading Developer: One of two developers building GracoTrack, a new app for wireless machine connectivity and analytics, improving health/maintenance decision-making.
- UI and Backend Development: Built and tested the app for iOS and Android using React-Native for frontend and AWS services like Cognito Auth & EC2, for backend
- Bluetooth Connection API: Developed the Bluetooth API, generated Protobufs for data serialization, and optimized charting library performance for large datasets.

Physics, CS, and Math TA

AoPS Inc.

Sep 2019 - Present

- Taught under the mentorship of <u>renowned professors</u> from prestigious institutions like **MIT, Stanford, Harvard, and Princeton,** ensuring high-quality education and guidance.
- Assisted in teaching advanced math, physics, and computer science courses since I was 17, including Olympiad Math, Number Theory, Linear Algebra,
 Combinatorics and Probability Theory, Calculus, and advanced OOPs with Python.

Education

Bachelor of Science

University of Minnesota - Twin Cities

Aug 2020 - May 2024

Major in Computer Science: Specialization in AI, ML, and Deep Learning (3.62 GPA, Dean's Honor List Awardee)

Research and Awards

Two-time International Semi-Finalist

Breakthrough Prize

2016 & 2018

- Judged by renowned scientists, mathematicians, and tech leaders, including Terence Tao, Sal Khan (Khan Academy), and Scott Kelly (Astronaut).
- Directed, scripted, voiced, and 2D-hand animated short science films explaining concepts such as Wave-Particle Duality Paradox and Space-Time Curvature in relation to gravitational time dilation. Used tools like Da Vinci Resolve, Adobe Premiere Pro, After Effects, and Toon Boom Harmony.