

DWITEE KRISHNA PANDA

CTO | FOUNDING ENGINEER | SOFTWARE ENGINEER

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AI/ML ENGINEER | TECHNICAL ARCHITECT | SOFTWARE DEVELOPER | BACK END DEVELOPER

With nearly two decades of engineering leadership across Big Tech, gaming, and startups, I thrive at the intersection of scalable software, AI innovation, and product impact.

From architecting India's first large-scale e-commerce gaming platform at **Flipkart**, to building AAA titles at **Electronic Arts**, and startups like **Mechmocha**, **Jumpstart** and now pioneering AI-Native applications as a startup **CTO** and **MSc researcher** at **King's College London**, I combine deep technical expertise with a passion for solving complex, high-impact problems.

Currently, I'm the **Co-founder & CTO of Skeptiq**, where I build **AI-first products and scalable agentic backends** leveraging **Google's Agentic Development Kit (ADK)**, **Vertex AI**, and **Model Garden**. My focus is on **orchestrating custom LLM agents**, integrating multimodal reasoning into production pipelines, and enabling human-aligned, explainable AI through real-time orchestration.

Current Tech Stack:

- **Backend:** Python, PyTorch, GCP (Cloud Run, Vertex AI, ADK)
- **Frontend:** TypeScript, Next.js
- **Database:** Supabase, PostgreSQL, MongoDB

Core Strengths:

- Architecting **distributed, fault-tolerant systems and real-time multiplayer platforms** using Java, REST APIs, Kafka, PostgreSQL, HBase, MongoDB
- Leading **cross-functional teams** from concept to global deployment
- Integrating **LLMs, RAG, diffusion models, and agentic frameworks** into production-grade systems
- Researching **AI orchestration, multi-agent collaboration, and adaptive reasoning** for next-generation applications.
- GameDev with C/C++, Physics Engine, Unity3D, C#, 3D Math, Game Play Coding

AREAS OF EXPERTISE

Microservices Architecture
Natural Language Processing
Android Development
Kotlin Development

Unity3D Programming
Artificial Intelligence
Distributed Systems
Software Junit Testing

BERT (Language Model)
MongoDB, PostgreSQL
Game Development
Docker Kubernetes

Spring Framework
Redis, Kafka, HBase
Sprint Planning
Graphics, 3DMath, OpenGL
TypeScript, NextJs

C++/C# Programming
Data Structures
System Design
Java, SpringBoot
Python, PyTorch

Multiplayer Games
Agile Methodology
Cloud Computing
Transformer Models
VertexAI, Azure Foundry

EDUCATION

- **Master of Science: Advanced Software Engineering, King's College London**, London, UK
 - **Bachelor of Engineering: Mechanical Engineering**, Veer Surendra Sai University Of Technology (Formerly UCE), Burla, August 2001 – May 2005, Percentage: 71
 - **CS184.1x : Computer Graphics**, edX. University of California, Berkeley
 - **Introduction to Psychology**, Coursera , Yale university
 - **edX Honor Code Certificate for Foundations of Computer Graphics**, University of California
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CAREER SUMMARY

Skeptiq, London, UK | Technical Co-founder & CTO | Aug 2025

Skeptiq (<https://Skeptiq.ai>) is an AI-first startup building scalable, human-centric product experiences that integrate advanced ML, NLP, and immersive tech to make intelligent solutions accessible across diverse sectors.

Key highlights:

- Driving the product vision and technical architecture, building scalable, human-centric AI solutions powered by ML, NLP, and multimodal intelligence.
- Designing and deploying core AI pipelines leveraging LLMs, retrieval-augmented generation (RAG), and generative interfaces, integrated with Google ADK for agent orchestration, custom tools, and backend logic.
- Establishing the full engineering foundation—cloud-native infrastructure, microservices, and CI/CD pipelines—ensuring scalability, reliability, and rapid experimentation at startup speed.
- Building and mentoring a cross-functional team of engineers, researchers, and designers, aligning technical execution with business strategy and investor engagement to accelerate product-market fit.

Masters of Science Student (Full-time) in Advanced Software Engineering | Sep 2024 -Sep 2025

King's College London, London, UK

- Developed ReMindMap, an AI-powered application that transforms video/audio content for users with comprehension challenges. The system uses speech-to-text (Whisper), summarization (T5/Gemini), and visual mind map generation (Mistral/Zephyr) to convert long videos into concise, structured, and interactive summaries.
- Engineered a full-stack solution with Next.js and Flask, ensuring seamless deployment on GCP and Vercel.
- Explored various transformer models for summarization, enhancing the application's efficiency and effectiveness.
- Created user-friendly features like aphasia-friendly narration mode, significantly improving accessibility.

Open source Projects:

AI / ML Research projects NER, NLP, RAG on Healthcare , Aphasia friendly Mindmap using t5, BART, whisper, agents creation , anam lab, elevenlabs etc please see my <https://github.com/Dwitee> and <https://huggingface.co/dwitee>

Technical Architect / Software Engineer (Freelance)

Remote Jan 2023 - July 2024

- Spearheaded architecture and development of AI-powered systems for AR/VR gaming, immersive media, and interactive experiences, aligning with the mission of building the next generation of computing platforms.
- Integrated transformer-based models (BERT, Gemini, DistilBERT), diffusion models, and multimodal LLMs into Unity-driven game pipelines and XR interfaces to enable intelligent character behavior, natural conversation, and real-time content generation.
- Integration and leveraging Hugging Face, Vertex AI, and PyTorch to existing product pipeline.
- Designed real-time animation and interaction systems using AI to drive avatar expression, scene understanding, and context-aware interaction in mixed reality settings.
- Developed full-stack pipelines for VR prototyping and in-meeting immersive platforms using React.js, Next.js, C#, and Unity, with backend orchestration in Python, Golang, and C++.

- Optimized game engine workflows and developer tools by integrating AI-based asset generation, voice control, 3D model construction using defusion models, ready to use in Unity3D.
- Mentored engineering teams on AI-first architecture, cross-platform performance optimization, and ethical use of AI in immersive systems.

Software Development Engineer 3 | September 2020 – September 2022

Flipkart, Bangalore, India

Duties and Responsibilities:

- Developed and enhanced backend systems for Flipkart's GamesZone feature using Java and Golang, driving increased user engagement and interaction through innovative game services.
- Designed and implemented scalable systems with **Java Spring Boot, MongoDB, Redis, Hbase, and Apache Kafka** to ensure high throughput, low latency, and fault tolerance.
- Provided strategic architectural guidance and technical leadership to development teams, facilitating informed decision-making and ensuring alignment with product objectives.
- Collaborated cross-functionally to seamlessly integrate game services into the Flipkart Mobile App, enhancing overall user experience and satisfaction.
- Led the design and execution of backend services for key game features such as leaderboards, tournaments, rewards, and game currency management.
- Defined system functionalities by meticulously documenting non-functional requirements and addressing complex challenges through innovative solutions.
- Spearheaded the automation of campaign management processes, optimising efficiency and effectiveness in user engagement strategies

Accomplishments:

- Increased Daily Active Users (DAU), Monthly Active Users (MAU), and session duration metrics by leading a team in successfully onboarding multiple games onto the GamesZone platform.
- Enhanced system reliability and performance through the implementation of robust monitoring and observability solutions using Grafana, Kibana, and Alertz dashboards.
- Improved scalability, responsiveness, and user satisfaction metrics by actively contributing to ongoing system enhancements and optimisations

Founding Engineer → Technical Architect / | March 2017 – September 2020

MechMocha Games Pvt Ltd, Bangalore

Duties and Responsibilities:

- Engineered and implemented scalable game server architectures supporting high concurrent user loads, utilising technologies such as Go lang, Apache Kafka, and microservices.
- Led the design and execution of High-Level and Low-Level Design phases, ensuring alignment with project goals and technical specifications.
- Managed project teams through allocation, task assignment, and mentorship to drive efficient project execution from prototyping to production release.
- Developed and integrated robust audio-video chat systems using Agora, enhancing real-time communication capabilities within multiplayer game environments.
- Spearheaded the development of Jetpack Joyride India, overseeing the implementation of dynamic game features including Dynamic Level Generator and Boss Levels.
- Integrated analytics platforms like Admob, Crashlytics, and CleverTap to optimise user engagement and refine payment strategies effectively.
- Collaborated closely with cross-functional teams in agile settings to deliver high-quality game experiences within scheduled timelines.

Accomplishments:

- Enhanced player engagement and retention by implementing sophisticated in-game systems such as Economy/Currency management, Score tracking, and Achievement Systems.
- Ensured adherence to best practices and scalability requirements through technical leadership and architectural guidance provided to project teams.
- Contributed to rapid development cycles and iterative improvements across multiple projects by actively participating in sprint planning and agile ceremonies.

Senior Software Founding Engineer | December 2015 – March 2017

IKA, Freiburg, Germany

Duties and Responsibilities:

- Collaborated with cross-functional teams to define and refine technical requirements and specifications, ensuring alignment with project goals and timelines.

- Applied software engineering best practices to design and develop intuitive user interfaces and functionalities that adhere to industry standards and regulatory requirements.
- Conducted comprehensive testing and debugging of software applications to maintain superior quality and functionality throughout the development lifecycle.
- Integrated cutting-edge technologies such as **AR/VR** interfaces and AI-driven capabilities like IBM Watson APIs for Speech to Text and Text-to-Speech functionalities, enhancing software features and user interactions.
- Collaborated with product management teams to prioritise features and functionalities, ensuring that software solutions meet market demands and customer needs effectively.
- Provided technical support and training to end-users and stakeholders, facilitating smooth adoption and utilisation of software applications.

Accomplishments:

- Achieved optimised data collection accuracy and efficiency in scientific research by enhancing software solutions for laboratory and analytical equipment.
- Ensured improved reliability and functionality of analytical applications in scientific research and development through successful implementation of performance enhancements to existing software systems.

Senior Software Engineer | August 2014 – Feb 2016

Jumpstart Games, Bangalore, India

Duties and Responsibilities:

- Implemented and managed features like Level Manager, avatar controllers for running, jumping, and swimming, and in-app purchases to enhance user engagement and monetisation strategies.
- Integrated MMO (Massively Multiplayer Online) features using web services for dynamic room creation and buddy chat functionalities, enhancing multiplayer gaming experiences.
- Ensured adherence to educational standards and objectives by collaborating with educational experts to design and develop content that facilitates effective learning experiences for children.
- Contributed to the development of UI/UX elements using NGUI (Next-Gen UI), ensuring intuitive navigation and accessibility for young users.

Accomplishments:

- Enhanced learning experiences for children by developing interactive educational games on iOS and Android platforms, featuring engaging character control and dynamic gameplay mechanics.
- Achieved cohesive game features and intuitive user interfaces by closely collaborating with level designers to seamlessly integrate mission-based and open-world levels.

Senior Software Engineer | November 2011 – July 2014

Electronic Arts Games, Hyderabad, India

Duties and Responsibilities:

- Developed and implemented advanced game mechanics and features for titles like The Sims and Monopoly, enhancing gameplay functionality and user interaction.
- Led the integration and optimisation efforts for cross-platform game development using C/C++, OpenGL 2.0, DirectX 11, and Unity3D, ensuring seamless performance across different devices.
- Collaborated closely with international teams to coordinate the development and deployment of gaming projects, fostering efficient communication and project alignment.
- Designed and implemented character control systems, customisation features, and AI algorithms, contributing to immersive and dynamic gaming experiences.
- Contributed to the design and implementation of cutting-edge visual effects and shader technologies, such as particle systems and GLSL effects, to enhance game visuals and atmosphere.

Accomplishments:

- Enhanced EA's proprietary EAMT game engine for improved reliability, scalability, and performance, ensuring seamless gameplay experiences.
- Facilitated rapid iteration and continuous improvement of game features through active participation in agile development methodologies, including sprint planning and retrospective meetings.
- Aligned technical requirements with game design and business objectives by collaborating closely with stakeholders, ensuring successful project delivery and alignment with strategic goals.

Software Engineer | November 2010 – Nov 2011

Geometric Limited, Pune, India

Duties and Responsibilities:

- Developed and implemented new features for CAD and PLM software solutions, enhancing functionality and usability in engineering applications.
- Enhanced simulation capabilities by refining cloth deformable and rigid body physics using Nvidia PhysX SDK, improving realism and accuracy.
- Designed and integrated 3D visualisations and collision detection algorithms, elevating interactive experiences and user engagement.
- Conducted continuous research on advanced cloth stitching algorithms, leveraging NVidia PhysX engines to innovate simulation technologies.

- Collaborated with cross-functional teams and Software Architects to align software development with project requirements and industry standards.
- Utilised C/C++ and UML for software design, ensuring scalable and maintainable solutions for CAD development and graphics engines.

Accomplishments:

- Optimised engineering simulation performance and precision through advanced 3D mathematics and geometry algorithms, ensuring robust software capabilities in CAD and PLM solutions.
- Achieved high client satisfaction by proactively engaging with stakeholders, assessing needs, and delivering tailored technical solutions that effectively addressed client requirements.
- Enhanced software effectiveness by gathering client feedback and integrating it into continuous improvements, driving usability and functionality enhancements in engineering applications.

CAREER SUMMARY CONTINUED

Senior Software Engineer | July 2005 – October 2010

Boeing (Infosys), Bangalore, India

Duties and Responsibilities:

- * Developed BoGART (Boeing Graphical ART) for airplane parts manuals ,
- * Written the CAD/CAM drawing software using C/C++/OpenGL.

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