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VP - Engineering

About Geminus

Geminus is the world's first *industrial process centric digital twin product* that delivers self-optimized design, predictive operational intelligence and asset performance enhancement to operators and engineering service providers. The product leverages *physics-constrained artificial intelligence* to deliver high-fidelity O&M intelligence and to continuously optimize the designs of assets & processes. Geminus integrates with operational data through SCADA systems, historian software, sensor gateways and enterprise asset management to trigger physics-constrained AI modeling of the end-to-end process for every significant time slice of data. This generates high-fidelity operational intelligence and design recommendations to prevent multi-step failures, adverse shifts in yield, structural process faults and degraded remaining useful lifetime.

The company is based in Palo Alto and venture funded by The Hive. It's co-founder and Chief Scientist, *Karthik Duraisamy*, has over a decade of rich experience in physics-based modeling and machine learning through both fundamental research as faculty at Stanford University & the University of Michigan and industry collaborations. The fast-growing R&D team combines experiences across physics modeling, AI, industrial domains and data operations. The product is in pilot deployments in oil & gas and hi-tech manufacturing verticals. The product is also being made available as a module in leading engineering simulation platforms.

About the Role

The VP - Engineering executive position is accountable for Geminus' end-to-end product architecture, engineering execution, technology innovation and product partnerships. The successful candidate will drive all internal architectural decisions and product development execution along with external collaborations with partners, industry bodies and developer communities. The position drives product innovation and maturity through deep understanding of technology & architecture across the entire business process lifecycle - planning, design, engineering, testing, deployment, performance management, mining and reengineering. This successful candidate will work closely with Geminus engineering, science and product management teams.

Responsibilities

As the engineering leader of a fast-growing early stage startup, the VP – Engineering will be accountable for Geminus' engineering execution in the short and long term:

- Drive and develop Geminus' engineering roadmap including end-to-end product architecture, development and incorporating the IP created by the Chief Scientist's Office
- Build, lead and mentor a fast-growing world-class engineering team comprising of architects and developers with data science, data engineering and industrial IoT backgrounds
- Lead the development and continuance of Geminus' end-to-end product including core physics constrained artificial intelligence (AI) engine, core algorithms, statistical parameter inferences, AI-based model training, threshold modeling and model selection
- Lead key product integrations with engineering simulation platforms, SCADA data systems, historians, enterprise asset management systems and edge sensor data platforms



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- Lead Geminus' predictive and prescriptive intelligence integrations into SCADA control systems, asset management systems and product design platforms
- Lead development of Geminus' solution offerings for engineering simulation platforms (as module libraries) and specific verticals (end-to-end solutions)
- Deliver Geminus' end-to-end performance optimizations including large scale data processing, scale-out computation and model fidelity
- Own Geminus' end-to-end data assurance including data quality assessment & remediation, data privacy protection, security, partner trade-secret protection and availability
- Own Geminus' end-to-end service assurance including constantly training physics-constrained AI models, threshold-triggered design & operational intelligence and quantifiable fidelity
- Evangelize, influence, and partner with key stakeholders including product partners, developer communities and industry consortia
- Collaborate with customers and partners through the product deployment lifecycle all the way from POCs & product pilots to amplify the relevance of Geminus' innovative approach

About you

The successful candidate will have a proven track record of shipping data-driven products in B2B SaaS or PaaS or software companies, preferably with exposure to industrial IoT.

- Experience with massively-scalable distributed compute product architectures
- Experience with developing artificial intelligence-based services involving model training, selection and serving
- Experience with microservices oriented architectures, TensorFlow based AI orchestration, test driven development (TDD) & other testing methodologies, and a zeal for automation at all levels
- Experience with scaling Big Data infrastructure (HDFS, Solr, ELK, Spark)
- Experience with engineering simulation platforms (ANSYS, Dassault Systems, Siemens etc.) preferred
- Experience with industrial IoT systems like SCADA data systems, historians and edge data systems preferred
- "Roll-up-your-sleeves" entrepreneurial, startup attitude
- Strong motivator, leader, team player with record of leading and mentoring employees
- Natural ability to relate to customers and prospects
- Experience delivering platform technology and creating an ecosystem of applications and services across multiple verticals and solution offerings
- Experience successfully scaling technology infrastructure to support rapid customer / data growth
- Experience with fast-paced, rapidly-iterating, design-forward, product-focused companies
- Experience scaling both in-house and offshore development teams

Please send your resume to jobs@geminus.ai.

Geminus is an affirmative action employer and welcomes candidates who will contribute to the diversity of our team.