MCP SERVER | NO CODE | CLOUD HOSTED

Pregnancy Due Date Engine MCP for AI Agents

Calculating Accurate Gestational Age and Prenatal Visit Schedules

The Pregnancy Due Date Engine calculates precise pregnancy timelines and clinical metrics. Use it to determine a patient's estimated due date, current gestational weeks, and trimester status from various inputs like Last Menstrual Period (LMP), IVF transfer dates, or ultrasound measurements. It also automates key prenatal scheduling and fetal growth tracking for accurate medical record keeping.

A+ Quality Score 100/100

pregnancy | gestational-age | due-date | ivf | prenatal

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vinkius.com/mcp/pregnancy-due-date-engine

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

Pregnancy Due Date Engine MCP

4 tools available
Cloud-hosted on Vinkius

Need precise clinical calculations for pregnancy progress? This MCP handles the complexity of determining due dates and gestational age using multiple biological markers. You can connect your AI agent to this tool to calculate Estimated Due Dates (EDD), current weeks, and trimesters based on data ranging from Last Menstrual Period (LMP) readings to IVF transfer details or ultrasound Crown-Rump Length (CRL). It helps track expected fetal weight percentiles with one function, identifies critical clinical milestones like viability, and even generates the full ACOG prenatal visit schedule. Because Vinkius hosts this MCP within its catalog, you connect your preferred AI client once and gain access to all these necessary reproductive health calculations.

Instead of manually cross-referencing multiple clinical guidelines and date formats, your agent handles it automatically. You get accurate progress status and a full overview of the patient's care plan in one go.

Core Capabilities

01 — Determine current gestational age

Calculates pregnancy progress and provides an estimated due date based on various clinical inputs.

02 — Identify key developmental milestones

Retrieves critical pregnancy markers, such as viability or full-term status.

03 — Estimate fetal size and weight

Uses measurements to predict the baby's current weight percentiles.

04 — Schedule routine prenatal visits

Generates a list of upcoming required medical appointments according to clinical guidelines.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/pregnancy-due-date-engine** — connect your AI agent in three steps.

01 Start by feeding the MCP relevant patient data, such as an LMP date or specific ultrasound measurements.

02 The engine processes this information, running multiple calculations to determine current gestational status and projected due dates.

03 Your agent returns a structured report detailing trimesters, key milestones, predicted fetal weight metrics, and necessary follow-up appointments.

The bottom line is you get accurate, clinically backed pregnancy progress reports without doing the math yourself.

Built For

This MCP is essential for healthcare providers—OB/GYNs, midwives, and nurse practitioners—who manage prenatal care records. It solves the constant problem of cross-checking multiple date sources (LMP vs. IVF transfer vs. ultrasound) to give a single, accurate picture of patient progress.

OB/GYN

Uses it to calculate definitive Estimated Due Dates and track complex cases involving different conception methods.

Midwife

Runs the schedule generation tool to ensure all required prenatal visits are logged accurately for a patient's record.

Clinical Nurse Coordinator

Determines fetal growth metrics and key milestones, allowing them to prepare educational materials or flag potential concerns before an appointment.

What Changes When You Connect

01 Determine the Estimated Due Date (EDD) instantly using `calculate_gestational_status`, regardless of whether the input is LMP, IVF date, or ultrasound data.

02 Track physical development with `get_fetal_growth_metrics` to estimate baby weight percentiles and flag potential concerns early.

03 Automate care planning by running `get_prenatal_visit_schedule`, ensuring every upcoming checkup is logged correctly for the patient chart.

04 Get a clear clinical picture of development using `get_pregnancy_milestones`, identifying critical markers like viability or full-term status quickly.

05 Avoid manual cross-referencing of multiple medical guidelines. This MCP provides a single, comprehensive calculation source.

Real-World Applications

Need to reconcile conflicting conception dates

A patient presents with an LMP that differs from their IVF transfer date. Asking the agent to use `calculate_gestational_status` solves this by providing a consolidated, definitive Estimated Due Date (EDD) based on all provided inputs.

Preparing for a routine follow-up visit

The nurse needs to know the next steps. Running `get_prenatal_visit_schedule` immediately generates required upcoming visits, ensuring no appointments are missed in the patient's record.

Assessing fetal development risk

A doctor suspects a growth discrepancy. Using `get_fetal_growth_metrics` estimates the baby's weight percentile against historical norms, flagging potential issues before physical examination.

Documenting key developmental status

The chart requires confirmation of viability or full-term criteria. The agent uses `get_pregnancy_milestones` to pull the necessary clinical data points for accurate record keeping.

Patterns to Avoid

Calculating dates manually

✗ AVOID

A user tries to calculate the due date by simply adding 40 weeks to an LMP, ignoring complexities like IVF transfer adjustments or ultrasound measurements.

✓ INSTEAD

Always use `calculate_gestational_status`. This tool handles multiple input types (LMP, conception dates, CRL) to give you a clinically precise Estimated Due Date.

Forgetting follow-up schedules

✗ AVOID

A provider completes the initial visit but forgets to update the patient's chart with all required future appointments.

✓ INSTEAD

Run `get_prenatal_visit_schedule` immediately after any calculation. It generates a precise list of upcoming visits so you never miss an appointment.

Treating development as static

✗ AVOID

Assuming fetal size is always normal without checking current data, leading to potential under- or overestimation of risk.

✓ INSTEAD

Use `get_fetal_growth_metrics` to get a real-time estimate of the baby's weight percentile. This gives you dynamic metrics for better patient care.

The Right Fit

Use this MCP if your workflow requires cross-checking multiple sources—LMP, ultrasound data (CRL), or IVF transfer dates—to generate a definitive gestational age and due date. You need clinical precision over simple calendar math. Don't use it if you only need to calculate basic days remaining; for that, a simple date calculator works fine. However, if your task involves determining milestones, tracking fetal growth percentiles, or generating structured care schedules (like the ACOG visits), this MCP is necessary. Specifically, rely on `calculate_gestational_status` for core dates, and then use `get_prenatal_visit_schedule` to close out the clinical documentation loop.

Pregnancy Due Date Engine: Calculating Gestational Age in Prenatal Care

Today, determining a patient's true gestational age is a nightmare of conflicting data points. You start with an LMP date, but then the provider gives you an ultrasound measurement (CRL), and if they used IVF, you have to account for Day 3 or Day 5 embryo adjustments. Copying all these dates into different systems and manually cross-referencing them takes hours, and getting it wrong affects everything.

With this MCP, your agent handles the entire calculation stack. You feed in a mix of data—like an LMP combined with a specific ultrasound measurement—and you get one clean output: the definitive Estimated Due Date (EDD) and current gestational weeks. It cuts out all the messy math and leaves you with actionable clinical status.

Pregnancy Due Date Engine: Managing Prenatal Milestones for Clinical Records

The challenge isn't just knowing *when* a patient is due, but documenting *what* they should be doing. Manually checking clinical guidelines to confirm if the baby has reached viability, or what milestone marks full-term status, requires constant reference library lookups and multiple clicks across different medical databases.

The engine solves this by running `get_pregnancy_milestones`. You ask for key milestones, and it pulls the necessary information directly. The result is a complete record of development that you can trust immediately.

Pregnancy Due Date Engine: 4 Tools for Gestational Age Calculation

These tools allow your AI agent to calculate due dates, track fetal growth metrics, identify key milestones, and generate required prenatal visit schedules using multiple clinical data points.

#	TOOL	DESCRIPTION
01	`get_fetal_growth_metrics`	Predicts the baby's weight percentile based on current measurements.
02	`calculate_gestational_status`	Determines overall pregnancy progress and calculates the estimated due date.
03	`get_pregnancy_milestones`	Retrieves essential clinical markers like viability status or full-term expectations.
04	`get_prenatal_visit_schedule`	Creates a precise list of upcoming required medical visits based on gestational age.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U Based on an LMP of 2024-01-01 and current measurements, what is the EDD and are there any concerns?

Pregnancy Status Report

- **Estimated Due Date (EDD):** October 7, 2024
- **Current Gestational Age:** 25 weeks, 3 days
- **Trimester:** Second Trimester
- **Fetal Metrics Check:** The estimated weight percentile is within the normal range (P50-P75). No immediate concerns identified.

U I had an IVF transfer on 2024-03-15 with a Day 5 embryo. What are my upcoming required appointments?

Prenatal Schedule (Day 5 Embryo)

Based on your input, here is the recommended schedule:

- **Week 16:** Mid-pregnancy ultrasound & bloodwork.
- **Week 20:** Anatomy scan.
- **Week 28:** Glucose screening and discussion of labor prep.

Please consult your provider for final confirmation.

U What are the key developmental milestones I need to know about right now?

Key Pregnancy Milestones Checklist

- ✅ **Viability Status:** Confirmed (Post-Week 20).
- ✅ **Full Term Definition:** Expected between Week 37+ and Week 42.
- ℹ️ **Next Focus Area:** Preparing for the third trimester, including understanding Braxton Hicks contractions.

Frequently Asked Questions

01 **How does the Pregnancy Due Date Engine calculate my due date if I had an IVF transfer?**

It handles complex calculations by factoring in your specific transfer dates (Day 3 or Day 5 embryo) alongside other metrics. It gives you a precise Estimated Due Date that accounts for all variables, so you don't have to worry about which date is 'most accurate'.

02 **Can I use this tool if my initial LMP data conflicts with an ultrasound measurement?**

Yes. The engine processes conflicting inputs—like different dates from your chart versus a recent scan—and uses `calculate_gestational_status` to provide the most clinically sound and consolidated progress report.

03 **Does this MCP help me keep track of necessary prenatal appointments?**

Absolutely. It generates a structured list of upcoming visits, based on your current gestational age. You can rely on `get_prenatal_visit_schedule` to ensure you never miss a critical follow-up.

04 **What if I need to check the baby's estimated weight percentile?**

You just run the fetal growth tool. It takes your current measurements and predicts the baby's weight percentile, which is crucial for spotting potential developmental concerns early in care.

05 **Is this MCP better than using standard online due date calculators?**

Yes, significantly. Standard calculators only use LMP. This engine processes multiple complex clinical inputs—like IVF dates and specific measurements—giving you a medically rigorous report that reflects real-world obstetrical care.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"pregnancy-due-date-engine": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

Pregnancy Due Date Engine is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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