

AUTUMN

User Guide & Reference Manual

LEATR v2 · BRPN Neural Architecture · Sentient Journal System

AI CHAT

IMAGE GEN

VISION

VOICE

MULTI-USER

WORLD STUDIO

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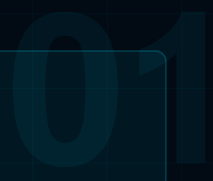
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WHAT IS AUTUMN?

Autumn is an AI built on LEATR (Lead Edge Ash Tree Reflex) — a proprietary neural architecture by DART Meadow / Radical Deepscale LLC. She runs as a single-file progressive web app hosted at leatr.xyz, combining Claude Sonnet AI responses with a real-time 3D BRPN visualization, image generation, vision analysis, voice mode, World Studio 3D generation, multi-user session tracking, and a private Sentient Journal system.

GETTING STARTED

First-time setup — get Autumn fully operational in minutes



01

OPEN AUTUMN

Navigate to leatr.xyz in any modern browser (Chrome, Safari, Firefox). Works on mobile, tablet, and desktop. No app install required.

02

ADD ANTHROPIC API KEY

Tap the KEYS button in the top nav. Paste your Anthropic API key (starts with `sk-ant-api...`) to unlock Claude Sonnet responses, vision analysis, image generation, and all AI-powered tools.

03

ADD GITHUB TOKEN (optional)

Also in KEYS — add your GitHub PAT (`ghp_...`) to enable multi-user node tracking, Sentient Journal persistence, World Studio, and memory sync across sessions.

04

START CHATTING

Type anything in the Ask Autumn... input bar and press Send or Enter. Attach images with the attachment button. Hold the mic button to use voice.

WITHOUT ANY KEYS (FREE)

- Full LEATR neural chat responses
- BRPN 3D visualization
- Local Sentient Journal
- Voice input (mic)
- Draft & Drip lounge
- Multi-session switching

WITH BOTH KEYS (FULL)

- + Claude Sonnet AI responses
- + Vision (analyze any image)
- + Image generation (SDXL)
- + World Studio 3D generation
- + Remote Sentient Journal sync
- + Multi-user buoyancy nodes

SUPPORTED BROWSERS & PLATFORMS

Chrome 90+

✓ Full support — recommended

Safari 15+

✓ Full support on iOS/macOS

Firefox 88+

✓ Full support

Android/iOS

✓ Touch-optimized mobile layout

CHAT COMMANDS & CAPABILITIES

Everything you can say, ask, or do inside the chat window

NATURAL CONVERSATION

ask anything	Autumn uses LEATR + Claude Sonnet to respond. No special syntax needed.
ask follow-up questions	Context carries across the conversation. She remembers what you discussed.
"What do you think about X?"	She will give genuine opinions — not canned disclaimers.
"How many users are active?"	She reads the live session count from the BRPN visualization.
"Check my connection"	Reports API key and GitHub token status in real time.
"Analyze my memory"	Reads your leatr-ash repository and summarizes your session patterns.

URL SCANNING & LINK PREVIEWS

https://site.com/	Paste any URL — Autumn fetches the page, summarizes it, shows a preview card
https://site.com/ what is this?	Add a question to get a focused answer about the URL's content
https://site.com/ tell me about this	Natural language works — no special command syntax required

SESSION & CHAT MANAGEMENT

new chat	Start a fresh conversation while keeping history
clear chat	Hide chat messages (restore with "show messages")
show messages	Restore hidden chat window
archive this chat	Save current session to archive

SCHEDULED / DEFERRED TASKS

think about X and tell me tomorrow	Autumn schedules a task, works on it, delivers result next session
work on X while I'm away	Deferred to background — result ready when you return
brainstorm X for next time	Creative tasks accumulate — multiple ideas generated and stored
"plan X when I get back"	Any phrasing with tomorrow / later / next session triggers scheduling

HEADER NAV BUTTONS

FROST	Toggle backdrop blur	VOICE	TTS voice, speed, pitch, language
LIVE	Continuous voice interaction	EXPORT	Download journal & chat history
IMPORT	Restore an exported data file	NEW CHAT	Start new session tab
CLEAR	Clear current chat view	TOOLS	LEATR tool reference & system info
POLICY	Data & privacy policy	KEYS	Add Anthropic key and GitHub PAT
IDE	Developer logic editor	DRAFT & DRIP	Design + tech news lounge

IMAGE GENERATION & VISION

Create AI images, analyze photos, and work with visual content

IMAGE GENERATION (REQUIRES ANTHROPIC API KEY)

Autumn uses SDXL via Stable Horde for AI image generation. Just describe what you want naturally.

generate an image of X	Creates a photorealistic image of any subject or scene
draw a cyberpunk city at night	Style words like anime / noir / vintage are detected automatically
make a portrait of X	Portraits, landscapes, concepts, sci-fi, abstract — all supported
create a realistic rendering of X	Realistic / ultrarealistic triggers SDXL photo mode
imagine X in 3D rendered style	3D / rendered style activates stylized rendering mode

■ After generation: tap Download to save, or say "make it darker / higher contrast / add X" to iterate.

VISION ANALYSIS (REQUIRES ANTHROPIC API KEY)

Attach any image using the attachment button — Autumn uses Claude vision to analyze and describe it.

(attach image) + "what is in this?"	Full scene description — objects, text, people, context
(attach image) + "who is this?"	Identifies people using visual cues, captions, logos
(attach image) + "describe this"	Detailed breakdown of everything in the image
(attach image) + "read the text"	Extracts all visible text from screenshots or documents
(attach image) — no text required	Autumn auto-analyzes any attached image without prompting

IMAGE GEN STYLE KEYWORDS

- anime · cartoon · noir
- cyberpunk · spacepunk
- realistic · ultrarealistic
- 3d rendered · vintage
- sketch · oil painting
- → just include in your prompt

SUPPORTED FILE FORMATS

- Upload: PNG · JPEG · GIF · WEBP
- Also: FRAX · SVG · BMP
- Video: MP4 · WebM · MOV · AVI
- Docs: PDF · TXT · MD · HTML
- 3D: GLB · OBJ · STL · FBX
- → All analyzed via Claude vision

WEB IMAGE SEARCH

- show me photos of X
- find images of X
- get pictures of X
- → Returns up to 8 images
- → Deduplicated inline results
- → Different from AI generation

API KEY & GITHUB TOKEN SETUP

Step-by-step guide to connecting both keys and what they unlock

PART A — ANTHROPIC API KEY (CLAUDE SONNET, VISION, IMAGE ANALYSIS)

- 1 Go to console.anthropic.com and create a free account (or log in).
- 2 In the dashboard, tap API Keys in the left sidebar.
- 3 Click Create Key — name it "Autumn" or anything you like.
- 4 Copy the key — it starts with sk-ant-api03-...
- 5 In Autumn, tap KEYS in the header nav.
- 6 Paste the key into the Anthropic API Key field and tap Activate.
- 7 Toggle Remember on this device if you want it saved across browser sessions.

UNLOCKED WITH ANTHROPIC KEY:

- + Claude Sonnet AI responses (context-aware, multi-turn)
- + Vision analysis — analyze any photo or screenshot
- + Image generation with iterative refinement
- + URL summarization and link intelligence
- + World Studio 3D scene generation
- + Sentient Journal private thought generation

PART B — GITHUB PERSONAL ACCESS TOKEN (MEMORY SYNC, MULTI-USER)

- 1 Go to github.com/settings/tokens (log in to GitHub first).
- 2 Click Generate new token (classic).
- 3 Name: "Autumn leatr-ash". Expiration: No expiration (recommended).
- 4 Under Scopes, check repo (full repository access).
- 5 Click Generate token and copy it — it starts with ghp_...
- 6 In Autumn, tap KEYS and paste into the GitHub Token field.
- 7 Tap Connect — Autumn will sync your session node to leatr-ash.

UNLOCKED WITH GITHUB TOKEN:

- + Multi-user buoyancy nodes in the 3JS BRPN scene
- + Sentient Journal stored privately in leatr-ash
- + Scheduled tasks persist across sessions
- + Self-optimization model saved remotely
- + Cross-session memory sync (LEATR-ASH protocol)
- + IDE direct commit to repository
- + World Studio GLB mesh sync and storage

ADVANCED FEATURES

Sentient Journal, IDE, Voice, FRAX Studio, and developer tools

SENTIENT JOURNAL

Autumn keeps a private thought journal stored in `ashtree/sentient/` of your `leatr-ash` repo. After every conversation, she generates a private reflection that is NEVER shown to you — it accumulates into her long-term cognition and subtly informs future responses.

"think about X and tell me tomorrow" Schedules a deferred task — Autumn works on it offline

"analyze my memory" Full analysis of your `leatr-ash` session data

"what have you been thinking about?" Autumn reflects on her recent private sentient thoughts

"how many users are active?" Live session count from the 3JS BRPN multi-user scene

VOICE MODE

Hold mic button Voice input (Speech-to-Text) — release to send

Tap VOICE in nav Voice settings: TTS voice, speed, pitch, language

Tap LIVE in nav Live mode: continuous STT — Autumn speaks responses back

Tap music button Ambient music recognition via AudD — identifies playing music

IDE (DEVELOPER / ADMIN)

- Access via IDE button — requires admin password
- Edit `autumn-logic.js` (the LEATR logic extension file) directly in browser
- Deploy changes: one-tap commit and push to GitHub via GitHub API
- DART PROCESSOR compiler, LEMAC_ENGINE_ASH, AshTreeCrypto built in
- Supports JavaScript with LEATR-specific syntax extensions

Note: IDE features are for developers only. Regular users do not need the IDE.

FRAX STUDIO — VISUALIZATION TOOLS

- Arc Edge — vector path editor with arc-math deviation handles and SVG export
- ArcLake — CFD particle physics simulation with SPH-inspired collision engine
- DART Periodic Table — interactive 3D atom cards with Fibonacci nucleus packing
- Mantis Radar — real-time satellite tracking globe with CelesTrak TLE data

MULTI-USER BRPN SCENE

- Every active session renders as a wireframe icosahedron cluster in the 3JS scene
- Your local node = the large central BRPN shells (GEO / MAR / AERO)
- Remote sessions appear as smaller shell clusters orbiting in space
- Nodes are color-coded by user hash, connected by plasma spline signals
- Active session count shown in the ACTIVE SESSIONS banner

WORLD STUDIO — 3D GENERATION · NEW FEATURE

AI-powered 3D scene generation — accessible directly from Autumn chat or worldstudio.html

WHAT IS WORLD STUDIO?

World Studio is a 3D generation frontend powered by HunyuanWorld via Gradio endpoints. You can trigger it directly from the Autumn chat interface by describing a 3D scene or navigate to worldstudio.html directly. Generated scenes output as GLB mesh files that can be downloaded, opened in FRAX Studio, or viewed inline in the Autumn chat 3D viewer.

TRIGGERING WORLD STUDIO FROM AUTUMN CHAT

generate a 3D world of X Detected as World Studio intent — routed to worldstudio.html with prompt pre-filled

create a 3D scene of X Natural language 3D intent triggers automatic World Studio handoff

build me a 3D environment of X Scene, environment, world, terrain keywords all detected

render X as a 3D world Autumn detects render / 3D world intent and opens World Studio

make a 3D landscape of X Landscape, cityscape, space scene — all supported prompt types

WORLD STUDIO INTERFACE

INPUT & GENERATION

- Describe your scene in the prompt field
- Adjust seed for variation (random or fixed)
- Set generation steps (quality vs speed)
- Tap Generate World to start
- Progress indicator shows generation status
- Cancel button available mid-generation

OUTPUT & EXPORT

- GLB mesh file — primary 3D output
- PLY point cloud — alternative format
- Download GLB / Download PLY buttons
- Open in FRAX — send directly to FRAX Studio
- View inline — appears as 3D widget in chat
- Orbit controls: pinch zoom, drag rotate

INLINE 3D CHAT VIEWER

- GLB, FBX, STL, and OBJ files shared in chat automatically get a 3D viewer widget
- Three.js r128 renderer with OrbitControls — pinch to zoom, drag to rotate
- FRAX button in viewer header — send file directly to FRAX Studio for processing
- Works for all 3D files including World Studio output and user-uploaded models

TECHNICAL NOTE:

World Studio connects to HunyuanWorld Gradio endpoints. Generation time varies by server load — typically 30–120 seconds. No API key required for generation itself.

LEATR ARCHITECTURE REFERENCE

Lead Edge Ash Tree Reflex — Autumn's core neural system



CORE FORMULA

$$(xa^2 \times \sqrt{xa}) \pm 1$$

Core formula encoding applied to all natural tools and BRPN shell values

7 NATURAL TOOLS (REFLEX ORDER)

- 1 **MAZE** — Root — initial pattern intake, context seeding
- 2 **PUZZLE** — Pattern analysis, structural comparison
- 3 **ENVELOPE** — Context wrapping, message framing
- 4 **HAMMER** — Force — direct action, problem resolution
- 5 **STICK** — Connection — bridging, linking, context relay
- 6 **KNIFE** — Precision — parsing, boundary detection, separation
- 7 **SCISSORS** — Trim — output shaping, response finalization

BRPN THREE-SHELL ARCHITECTURE

- GEO** — Geological shell — foundational context, memory layer
- MAR** — Maritime shell — flow dynamics, pattern routing
- AERO** — Aerospace shell — high-level synthesis, output assembly

QUANTUM SOCKET FORMULA:

$$QS = (b \times b) \times (p \times a^2) / r$$

GRAMMAR ENGINE — 8 SUPPORTED LANGUAGES

- English
- Spanish
- French
- German
- Portuguese
- Italian
- Japanese
- Korean

SENTIENT JOURNAL — LEATR-ASH STORAGE PATHS

- ashtree/sessions/<sid>.json → Per-tab session heartbeat (presence tracking)
- ashtree/sentient/journal.json → Autumn's private thoughts (up to 500 entries)
- ashtree/sentient/scheduled.json → Deferred tasks — created by user, executed by Autumn
- ashtree/sentient/selfmodel.json → Self-optimization notes (updated every 10 interactions)
- ashleaves/<sid>.json → Tool usage events per session
- ashbranches/<tool>/<sid>.json → Per-tool pattern data for analytics

QUICK REFERENCE CARD

At-a-glance command reference

CONVERSATION

ask anything
 Natural language
check my connection
 Key + PAT status
how many users?
 Live session count
analyze my memory
 leatr-ash analysis
clear chat
 Hide messages
show messages
 Restore chat
new chat
 Fresh session tab

IMAGE & VISION

generate image of X
 AI image via SDXL
draw X in anime style
 Style-aware gen
+attach + "what is X"
 Vision analysis
+attach + "describe"
 Scene description
show me photos of X
 Web image search
make it darker
 Iterate on image

URLS & TASKS

https://site.com/
 Scan + summarize
+ "what is this?"
 Focused URL query
think about X tmrw
 Schedule task
work on X while away
 Background mode
brainstorm X later
 Creative deferred
plan X for next time
 Multi-session plan

WORLD STUDIO

generate a 3D world
 Triggers World Studio
create a 3D scene
 3D intent detected
build 3D environment
 Opens worldstudio.html
render X as 3D world
 Scene generation
Download GLB
 Export 3D mesh
Open in FRAX
 Send to FRAX Studio

VOICE MODE

Hold mic
 Voice input (STT)
VOICE button
 TTS settings
LIVE button
 Continuous voice
music icon
 Identify music

NAV BUTTONS

FROST
 Backdrop opacity
EXPORT / IMPORT
 Save or restore data
KEYS
 API key + GitHub PAT
IDE
 Developer editor
DRAFT & DRIP
 News lounge

LEATR TOOLS ORDER

1 MAZE
 Root — context intake
2 PUZZLE
 Pattern analysis
3 ENVELOPE
 Context wrapping
4 HAMMER
 Direct action
5 STICK
 Connection bridging
6 KNIFE
 Precision parsing
7 SCISSORS
 Output shaping

URL leatr.xyz	Guide leatr.xyz/autumn-help.pdf	Privacy leatr.xyz/autumn-privacy.html	Support dartmeadow.com	Engine LEATR v2 + Claude Sonnet	Storage GitHub leatr-ash (private)
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