

SUMMARY

Generalist engine programmer keen on high-level systems, architecture and performance critical code. I have professional and open-source experience in engine programming and related low-level systems such as graphics, audio, gui and vector graphics. Priorly, I have 10 years of experience in gameplay programming and research experience in academia.

Languages/frameworks: C++, C, C#, Rust, Python, Dart, DX12, Vulkan, Metal, OpenGL, dear imgui, miniaudio, jolt physics, cmake, premake, git, win32, macOS, iOS & android

Engines: Unreal Engine, Unity, Cryengine, Hypehype & custom engines.

WORK EXPERIENCE

Senior Engine Programmer 01/2022 - present
Hypehype Inc. Helsinki, Finland

- Overall: design, development and maintenance of gameplay & multiplayer systems, tooling, software engineering.
- Gameplay: “replay” system for deterministic gameplay playback, visual scripting tools development & maintenance.
- Multiplayer: traditional multiplayer as well as low-latency high player count “ghost” multiplayer, along with editor co-editing. Real-time server development for supporting multiplayer features, such as high-performance VOIP processing.
- Tooling: logging utilities, “cinematics”; in-editor timeline creation and animation tool, “pixart”: in-editor pixel art painting tool.
- Util: engineering work for bettering the project structure, cpp → dart communication bridge, clang tools, cmake etc.

Engine Programmer 2019-present
My open-source projects

- Stakeforge: simplistic & performance oriented 3d game engine
- Lina Engine: modular & generic 3d game engine with a custom editor
- LinaGX: cross-platform rendering library that seamlessly integrates DX12, Vulkan and Metal.
- LinaVG: 2D vector-graphics library for drawing anti-aliased convex shapes, lines and texts
- Unreal Engine: Plugins for tweening and event systems.

Game Programmer 2010-2021
Freelance work

- Freelanced as a game programmer around 10 years, customers ranging from groups within Aalto University to indie mobile studios. Worked on desktop, mobile, virtual reality, simulation and serious games.
- LuxTurrim5G VR: **Aalto University, Nokia**, 2021
- Stelo VR: **Aalto University, FRAGE**, 2020
- Balleap, Sticky: **Lugcap**, 2016 - 2018

Research Assistant 10/2019 - 05/2021
Aalto University School of Science Espoo, Finland

- Published as 1st author, CHI PLAY 2022: **Cine-AI** Generating in-game Cutscene in the Style of Human Directors
- Published as 1st author, CHI PLAY 2020: **3PP-R** Enabling Natural Movement in 3rd Person Virtual Reality
- Worked as a researched assistant during my master's in Game Design and Production, researched about procedural content generation, 3D animation programming, virtual reality locomotion and orientation.

Tools Developer 2018 - present
Unity Asset Store

- I have been developing and publishing various tools in Unity Asset Store including first-person systems, ballistics physics, camera systems and shaders. I still provide support and updates for my packages and develop new ones as side projects.

Stakeforge

Performance oriented 3d game engine made with C++ from scratch

2025 - present

<https://github.com/inanevin/stakeforge>

- Successor to my previous game engine; Lina. Started as a learning project for performance-first mindset.
- Data-oriented subsystems, entities, components, resources, widgets, animations, bones; any system that fits “where there is one there is many” mentality is coded with cache friendly, branchless mindset.
- Little to no runtime dynamic memory allocations, minimal abstractions and heavy focus on data layout design.
- Production friendly workflow, JSON based shader, particle, scene, animation graph, material & texture definition pipelines.
- Production quality game loop and frame iteration, frame pacing, presentation monitoring, profiling tools.

Unforeseen

First-person sci-fi, thriller and adventure game

2014-2016

<https://inanevin.com/gameprojects/unforeseen>

- Full body FPV animations, polished voice acting, made by a team of 3 within 2 years. I was the sole programmer.
- Designing & implementing player systems, gameplay, audio/UI/VFX systems, lighting and cinematics.
- First time experience on a huge project, acquired many skills regarding finalizing and polishing a product.

EDUCATION**Master of Science**

Game Design and Production, 2019-2021

Honours, GPA: 4.66 / 5.0

Aalto University, Finland**Dissertation**

Cine-AI: generating in-game Cutscenes in the Style of Human Directors

Bachelor of Science

Software Engineering, 2014-2019

High Honours, GPA: 3.8 / 4.0

Izmir University of Economics, Turkey**Dissertation**

Lina Engine, a light-weight Entity-Component-System based open-source 3D game engine. Architecture design and proof of concept implementation, along with a Software Design Document (SDD).

ACHIEVEMENTS

Publication as the First Author, CHI Play 2022

[Cine-AI: Generating in-game Cutscenes in the Style of Human Directors](#)

Publication as the First Author, CHI Play 2020

[3PP-R: Enabling Natural Movement in 3rd Person Virtual Reality](#)Amongst the top 50 students all around the world
in Unity Student Contest for GDC All Access Pass, 2018Game Design Concept Funding By AVEK,
Kopioisto[Think Backwards GDD](#)1st Place Award in GBYF (Young Minds New Ideas)
Bachelor's Thesis Exhibition[Lina Engine](#)

- Global Game Jam 2016 Ege 3rd Place Award: [AIn](#)
- DOGED, TTNet Build-Up 2015 1st Place Award: [Ivan](#)
- Global Game Jam 2015 Ege 2nd Place Award: [Bak Napalim](#)
- DOGED, TTnet Build-Up 2014 2nd Place Award: [Phase Magician](#)
- Global Game Jam 2014 Ege 1st Place Award: [Psychic Baby](#)