

Rafael Hedman

Creative Programmer

Devoted to the fusion of visual, aural and narrative expression, attaining a transcendent meld for someone to experience the fantastic in – be it admiring the view in an open-world game, grasping fractions in an educational app, or perceiving the essence in a piece of generative art. If you ask me, the four basic elements are graphics, physics, music and story; and programming the elixir able to transmute them into all and everything.

With many strings to my bow, I have much to give on several levels – a sense of beauty in word and image, shape and movement, chord and algorithm, impression and experience, purpose and performance. It's been said that prototype design and development is one of my strongest abilities. My code has also been likened to Japanese woodwork.

Work experience

Full-stack Developer, ELK Studios; Stockholm 2020-07 - present

Developed and named the tool Game Changer, for managing changes to games and critical components, generating reports for auditing instances and jurisdictions, as well as handling deployment and release. Worked in a minimal team of two programmers, doing everything from database architecture to business logic implementation and user interface design.

Game Client Developer, ELK Studios; Stockholm 2019-08 - 2020-06

Developed the game clients for the titles [Cygnus](#), [Micro Knights](#), [Io](#) and [Nitropolis](#); taking them from pre-production to release, usually as the 1 of around 1.5 programmers, in small teams of about 5 people. Very close dialog with art directors, artists and animators. The work revolved around constructing and composing timelines of 2D-animations, exported from AfterEffects using custom sequencing technology.

Developer, King; Stockholm 2018-05 - 2018-11

Worked on [Candy Crush Friends Saga](#) during the final stages before hard launch. Implemented the introductory tutorial, shown when playing level 1 for the first time. Accomplished the effect on the character charge meter when collecting your assisting character's favorite candy. Realized the effect on the move counter when reaching 5 remaining moves. Implemented the large animated Raspberry Twister Cake blocker. Prototyped a new blocker concept. I was the contact point for the audio team, caring for the game's music and sound effects. Brought about A/B tests for a number of features.

Developer, Modesty; Stockholm 2009-04 - 2018-05

Game and game-like development for Vodafone and Bonnier Tidskrifter (KP). Web development for MTG, Unibet, H&M, Folksam, Samsung and Cabonline. Mobile app development for Vodafone and Avanza. Music production and sound design for a children's game.

Developer, AD&D; Stockholm 2006-09 - 2009-04

Created websites and games in award-winning internet campaigns for Diesel, Peak Performance, Fifth Avenue Shoe Repair, Resteröds, Avis, KICKS, Lantmännen and ZTV.

Developer, Starlet Deluxe; Stockholm 2000-02 - 2001-05

Created games in award-winning internet campaigns for clients like Popwire, SBAB, Telia, Emfas (predecessor to Eniro), Posten, and Dagens Industri.



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Skills

Creativity, Innovation,
Concept Development,
Game Design

Prototyping, Gameplay,
Mathematics, Physics,
Object Orientation,
Clean Code, Testability,
Debugging

Writing, Illustration,
Music Production

Aesthetics, Pedagogy,
User Experience,
Game Feel

Programming

C++ (11/14/17/20), C#,
Go, Python, PHP, SQL,
JavaScript, HTML, CSS

Game engines, SDKs

Unity, Unreal Engine,
Fiction Factory, Defold,
Stencyl, PhysX, DirectX

Libraries, frameworks

PixiJS, MobX, React,
Next.js, Angular,
Node.js

Education

Game Programming, PowerHouse; Kramfors 2002-08 - 2005-06

Post-secondary vocational education and training, focused on game programming in C++. Included an extensive course in 3D rendering from the ground up, followed by studies of the DirectX APIs. Also covered game design, level design and other vital areas of game development.

Physics, Stockholm University; Stockholm 2001-08 - 2002-06

Basic and continuation courses, covering mechanics, thermodynamics, electromagnetism, optics, special relativity theory, quantum mechanics and experimental physics.

Internet Programming, Capital School of Multimedia 1999-06 - 1999-12

Vocational courses in multimedia and web programming. Single-handedly designed and developed a 3D game as final project, manipulating polygons and lines in real-time using Lingo in Director, before 3D support was introduced. Space Invaders 2000 I named it, featuring flocks of intruders twirling around in various formations, and a turning cannon to blast them with.

Mathematics, Stockholm University; Stockholm 1994-08 - 1998-06

First Degree Programme in Mathematics and Computer Science (Matematisk-datalogiska linjen). Specialized in mathematics. Extensive studies in pure mathematics, up to advanced level in some areas like topology, analytical functions and functional analysis. Basic studies in logic, mathematical statistics, numerical and applied mathematics, and computer science.

Natural Sciences Programme, Norra Real; Stockholm 1991-08 - 1994-06

Upper secondary education, specializing in mathematics, physics, chemistry and biology. Wrote my special project in mathematics, titled Something about Algebraic Curves.

Adolf Fredrik's Music School; Stockholm 1985-08 - 1991-06

Primary and lower secondary education, with heavy emphasis on music and choral singing at a high national and international level. Performed at The Royal Swedish Opera, Stockholm Concert Hall, Hovet and many of Stockholm's churches.

Awards

Finalist, Innovative Advertising Awards, New York Festivals 2009

[Diesel Genes of Sweden](#); AD&D, Diesel

FWA of the Day, FWA 2008

[Diesel Genes of Sweden](#); AD&D, Diesel

Bronze, Internet Rich Media Advertising, Clio Awards 2001

Do you have what it takes to become a popstar?; Starlet Deluxe, Popwire

Golden Egg, Internet Advertising, The Golden Egg Awards 2000

Do you have what it takes to become a popstar?; Starlet Deluxe, Popwire

Diploma, Internet Advertising, The Golden Egg Awards 2000

Emfas Business Quake Banner; Starlet Deluxe, Emfas (predecessor to Eniro)

Tools

Git, Subversion, Make, Jenkins

Visual Studio, Xcode, IntelliJ

3ds Max, Illustrator, Photoshop, Sketch, Pages

Cubase, Logic, Reason, Pro Tools, Audacity, FastTracker II

Languages

Swedish: native

English: full professional

French: limited working

Russian: like a child

Musical instruments

Percussion: intermediate

Piano: beginner

Guitar: beginner

Voluntary Work

Amnesty International:

Refugee Group

Interests

Art, Music, Literature, Science, Physics Simulation, Pedagogy, Sailing, Video Games