

Resume of Gabor Nagy

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A highly quality-oriented, and motivated software engineer with extensive international experience in software design and development and proven problem solving skills, seeking a lead engineering position in software R&D.

Main skills

- 3D modeling, rendering and animation research and development:
I'm the creator/developer of EQUINOX-3D.
- Scientific visualization, terrain rendering, satellite image processing, realtime weather imagery in 3D
- General image processing: wrote EPaint and 2DLib (an image-processing library used by EQUINOX-3D and Epaint).
- User interface: wrote my own widget set, called Xe and designed/created the GUI for EQUINOX-3D etc. and co-wrote a programmer's text editor.
- Design and implementation of very efficient large systems with APIs.
- UNIX / Linux network programming (TCP/IP sockets, signal-driven design) and system administration.
- 3D artwork and web/graphics design

Programming languages and systems

- Assembly, C/C++, Cg, GLSL, Linux, UNIX, Macintosh OS-X, OpenGL, Xt, X11, Motif, Xe, Sony PlayStation-2 and 3.

Work experience

- Sony Computer Entertainment America, R&D group

1998-present

- Created the 3D environment (artwork and programming) for the now famous "duck demo", shown at the introduction of the PlayStation-3 at E3 in 2005.
I am also one of the main architects of COLLADA, currently leading the COLLADA physics effort.
- Interactive 3D graphics, scene-graph API, real-time photorealistic rendering (including global illumination with spherical harmonics).
- Developed one of the first renderers and made demos for the PS-2.

- ALIAS|WAVEFRONT, Toronto, Canada 1996-1998

- 3D modeler development for Power Animator and Maya. For example, I added polygonal boolean operations to Power Animator.

- SEGA of Japan Ltd. Tokyo 1994-1996

- Virtual-reality research, using head-mounted displays and electromagnetic spatial sensors. Implemented the stereoscopic camera, head tracking, 3D engine, and created some of the 3D art work.
- Co-designed and built a real-time motion-sampler armature (hardware and software).
- Developed custom software tools for game designers on SGI workstations.

- Varga Studio Film & Video Ltd. Budapest, Hungary 1993-1994

- Worked on TV commercials (live+CG), a CG animation for HBO and a music video.

- Built self-designed computer hardware products for Amiga computers 1990-1993

Articles, publications

Game Programming Gems (by Charles River Media): 2000

- 'Convincing-looking glass for games'
- 'Real-time shadows on complex objects'
The book has sold 10s of thousands of copies, and was translated to 14 languages.

GURU computer magazine 1993

- 'Programming the new AA chip-set' (two part article series)

Education

Kando Kalman University Of Technology, Budapest, Hungary 1989-1993

Computer science / Mathematics faculty, Software technology dept.

Thesis: 'DELTALink™' networking system

Field of study: Electronics engineering, computer architectures and software design

Qualification: BSc. in Computer Science and electrical engineering.

Kando Kalman Technical High school, Kecskemet, Hungary 1985-1989

Qualification: computer technician -

Languages:

English (fluent), Hungarian (native), Japanese (very basic)

Other interests:

- Flying. I'm a 560-hour private pilot with an (airplane) instrument rating and helicopter ratings.

