

# NICHOLAS KLOSE

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## Work Experience

 **Improbable Edmonton UX Programmer** May 2019–present

- Working closely with C++ code, Blueprints, UMG, Slate, Improbable's SpatialOS framework, and various middleware to create and iterate on systems for UI/UX and gameplay for an unannounced UE4 RPG<sup>1</sup>
- Credited as a contributor to Unreal Engine version 4.26<sup>2</sup>
- Using a development paradigm focused on stability, limiting regressions, and test-driven development
- Created and maintained a robust suite of automated tests for UI and other systems

 **BioWare Edmonton Technical UX Designer** May 2017–May 2019

- Technical design for the 2019 game Anthem using the Frostbite engine, C++ and visual scripting
- Programming, design, and User Experience Research iteration for key flows and UIs
- Brought various systems through the full production pipeline, from concepting to ship
- Specialized in social systems, transitions/streaming install, inventory management, and customization



**Alberta Biodiversity Monitoring Institute Software Developer + IT** May 2016–May 2017

- Full-stack development for the NatureLynx<sup>3</sup> mobile app
- Frontend development for CamTraps, an internal website for trail camera photo tagging
- Deployed and managed workstations, servers, and databases for various projects
- Worked closely with Apache Cordova, Tomcat, Java, Scala, SQL, JavaScript and HTML5/CSS3



**Mechanical Engineering IT Group (U of A): IT Support** Sep. 2015–Aug. 2016

- Provided IT support to ~6,500 individuals including graduate students, professors, and support staff<sup>4</sup>
- Configured and deployed various types of servers running Windows Server and Apache
- Deployed and managed hundreds of workstations, servers, printers, and other hardware

 **DiscoverE Technology Specialist** Jul. 2007–Nov. 2015

- Collaborated with teams of 5–50 people to create and deliver STEM camps, workshops, and clubs
- Created two MOOCs, sponsored by the 2013–2015 Google RISE awards
- Designed and delivered ~25 week-long Computing Science camps and hundreds of workshops

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<sup>1</sup> A multiplayer Role Playing Game using Unreal Engine 4 and SpatialOS.

<sup>2</sup> This was for a quality-of-life editor improvement to allow specifying a base widget class ([release notes](#))

<sup>3</sup> Apache Cordova app for crowd-sourcing Albertan wildlife photos for biodiversity monitoring and research.

<sup>4</sup> This involved supporting many hardware configurations running Windows/OS X/Linux.

## Education

University of Alberta

- **2015:** Bachelor of Science: Computing Science (Major), Mathematical Sciences (Minor)
- **2015–2017:** Software engineer for ADCS on the Ex-Altia 1 satellite<sup>5</sup>
- **2013–2014:** President of the University of Alberta SPIE Student Chapter<sup>6</sup>

## Software

- **Unreal Engine 4:** Implementation using Blueprints and code; contributed changes to the engine
- **C++:** Programming for two AAA game projects
- **Python:** Several independent projects (available on GitHub, see link in header)
- **Java, Scala, HTML 5, CSS 3, JavaScript, SQL:** Full-stack development on several ABMI projects
- **C, C#, MIPS, Lisp:** Several personal and school-related projects
- Developed several Android apps for work, course-related, and personal projects
- Managed servers running platforms such as Apache, IIS, MediaWiki, and Tomcat

## Design

- 10 years creating digital media, mainly using Blender and Photoshop for personal projects
- Hobbyist experience with music production using FL Studio and music scoring using Finale

## Other Projects

- Customizable games for Sifteo cubes to help children with dyslexia learn to read
- Steganography program which encodes long text strings into image files<sup>7</sup>
- Biomembrane Image Correlation Spectroscopy, a school project for the University of Alberta Department of Chemistry's graduate research program<sup>8</sup>

## Fun Facts

- Content creator on Twitch<sup>9</sup>
- 25 years performing and composing music for piano, guitar, and other instruments
- Professional jazz saxophonist
- 110+ words per minute typing speed (Dvorak and QWERTY layouts)

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<sup>5</sup> Details: <https://www.asc-csa.gc.ca/eng/satellites/cubesat/ex-alta-1.asp>. ADCS: Attitude Determination & Control System.

<sup>6</sup> SPIE is the international organization for optics and photonics research and development. This involved developing a Laser Harp, Laser Maze, and LED Table, and coordinating a trip club to the Optics+Photonics Conference in San Diego.

<sup>7</sup> Available on GitHub here: <https://github.com/nklose/Steganography>

<sup>8</sup> Designed and implemented desktop and web UIs, added batch file support, created installers for Windows/OS X/Linux. Available on GitHub here: <https://github.com/nklose/ICS>

<sup>9</sup> I stream mainly multiplayer games and piano music.