Terrance Niechciol

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eat.sleep.build

Work Experience

Remind (Co-op evaluations: Outstanding/Excellent)

remind.com/about
Jan. 2015 - Aug. 2015
Ruby, Go, Javascript
Rails, DynamoDB, React.js

- Replaced a prototype chat backend with a chat micro-service, to separate chat performance concerns from the main API
- Updated the SMS and Email processing to support new chat features/safety requirements
- Rewrote major parts of the web dashboard using React for feature parity with the mobile client

A Thinking Ape (Co-op evaluations: Excellent/Excellent)

athinkingape.com/about
May 2013 - Aug. 2013, Jan. 2014 - Aug. 2014
Objective C, Python, Javascript, Java
iOS, Django, Android, GLES 2.0

- Developed the iOS frontend of a prototype poker app focusing on playing with friends, which eventually became Pineapple Poker
- Created and improved analytics tools on the metrics team in order for them to filter information faster and be able to see a user age breakdown for specific days
- Developed frontend features for a 3D racing game on Android, including an interactive map, and the movement/drifting animation for the cars using GLES 2.0

Personal Projects

Geometry Wars Clone

eat.sleep.build/Projects/GeoWarsClone
youtu.be/Xv-3VLCFOQM
Sept. 2013 - Dec. 2013
Scala
LWJGL, OpenGL, GPGPU

- Created a clone of the Xbox Live Arcade game Geometry Wars to learn how effects like the deformable grid, and bloom are implemented
- Coded the particle simulation to run on the GPU in order to have hundreds of thousands of particles without slowdown
- Created a dynamic music system that plays more intense music when more enemies are present

ATA Co-op Hackathon Game

eat.sleep.build/Projects/ATAHackathonGame
youtu.be/y7BLvpp1HIY
Two days during April 2014
Java
libGDX, OpenGL

- Created a 2D multiplayer deathmatch platformer for a 48-hour hackathon at A Thinking Ape with two other programmers, and two artists
- Added the ability for players to phase through walls in order to add variety to the combat

Defered Renderer with SSAO

eat.sleep.build/Projects/DeferedRenderer
youtu.be/eJY72rMtFx4
Sept. 2014 - Dec. 2014
Scala
LWJGL, OpenGL

- Created a tech demo to learn how to implement some modern graphics techniques
- Implemented normal mapping and specular mapping to make walls look more detailed
- Implemented defered rendering in order to efficiently render many lights
- Used depth information from the defered rendering process in order to create a screen space approximation of ambient occlusion, in order to have light falloff more realistically around corners

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Nov. 2012 - present
Haskell
lighttpd

- Created a Haskell webapp running on top of lighttpd
- Created an Html DSL using monads to programmatically compose html
- Built from a "Hello World" Haskell application into a full website in order to better understand other frameworks like Django and Rails

School

4B Computer Science at University of Waterloo – Expected graduation: April 2017