

DOYLE T.

Print Friendly Summary: doy-lee.github.io/doylet_resume_summary.pdf

DETAIL

This Resume: doy-lee.github.io
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Github: github.com/doy-lee
Flickr: [flickr.com/doy-lee](https://www.flickr.com/photos/doy-lee/)

RESUME QR CODE



WORK EXPERIENCE

- CURRENT** AOS Group **AI Toolchain/Planning Engine Team: (aosgrp.com)**
2020 OCT Software Engineer
AOS creates tools to model real-world systems via reasoning agents running in AOS's real-time BDI (Beliefs, Desires, Intentions) planning engine providing fault-tolerant, traceable and explainable autonomous real-world systems.
- C++11, Kafka, RTI DDS, SFML, Dear ImGui, BDI/Multi-Agent Protocols, Windows/Linux
 - Write a 2D simulation engine w/ ECS for tests and demonstration of interactive agent models.
 - Converting real-world system specs to a multi-agent paradigm to highlight deficiencies in the development methodology leading to new protocols such as how to share beliefs between teams of agents and interactive human contribution into agent decision making.
 - Co-implement a distribution protocol for the planning engine allowing the synchronisation of other engine instances for fault-tolerance and cross-engine agent collaboration.
 - Documenting best practices and tutorials for designing effective multi-agent systems.
- 2020 OCT** **Oxen (prev. [Loki](https://github.com/oxen-io/oxen/commits?author=Doy-lee))** **Blockchain Team (github.com/oxen-io/oxen/commits?author=Doy-lee)**
2018 FEB Software Engineer
Oxen is a blockchain company that creates privacy tools that enable untraceable, secure and anonymous money, onion routed messaging and networks powered by a masternode network on-top of the blockchain.
- C++14, Boost, Docker, CMake, Libsodium, Monero/Cryptonote, Windows/OSX/Linux/Android
 - Implement layer 2 masternodes which are quorums of permissioned nodes via new chain protocols: de/registration and payout transactions and self-regulating consensus with reliability metrics and voting via a P2P gossip network.
 - Improve chain resilience by securing blocks using checkpoints formed by masternode consensus providing faster settlement and finalization of transactions on the network.
 - Implement an on-chain DNS registry for named records for wallets, messaging aliases and domains on the onion routed networks.
 - Transition from Proof of Work to Proof of Stake on a decentralized network using a commit-reveal scheme for generating non-exploitable entropy for block generation.
 - Responsible for building, packaging and distribution of releases. Patching vulnerability disclosures and fixing network stalls on an in production network.
 - Fix/improve/create test tooling for the Service Node network including a re-write of the Monero testing framework and integration tests using IPC named pipes over multi-process.
- 2017 NOV** **Wargaming** **Client Tools Team (wargaming.com/en/about/)**
2017 AUG Intern SWE
 - Assisting with the game editor for the asset pipeline involving C++11, Qt, Jira, Perforce, Plastic

SIDE PROJECTS

- ONGOING** Dqn Library **Personal Utility Library C++ (github.com/doy-lee/dqn)**
- Helpers to bootstrap projects quickly and improving my API design by experience
 - Cache friendly stack based containers for data that has a low upper-bound
 - Arena based allocators for manual, cheap heap allocation and freeing
 - For learning, SHA3-256, unit test, C/C++ metaprogram generator library
- 2020** RaylibSIMD **SIMD Software Rendering (SSE, 4x faster) (github.com/doy-lee/RaylibSIMD)**
2017 **DTRenderer** **3D Software Render from First Principles (github.com/doy-lee/DTRenderer)**
. **DChip8** **CHIP8 Interpreter (C/C++, Win32) (github.com/doy-lee/dchip-8)**
. **Math Mash** **Mobile Game (C++, Photoshop, Cocos2dx) (doy-lee.github.io/luneaustralia)**
2016 **Dengine** **Basic 2D Engine (C++, OpenGL, GLFW, STB, OpenAL) (github.com/doy-lee/dengine)**

EDUCATION

2014-2017 UNIVERSITY OF NEW SOUTH WALES Bachelor of Science (Computer Science)
