# DOYLE T.

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

## DETAIL

**This Resume:** doy-lee.github.io
**Email:** doylet@protonmail.com
**Github:** github.com/doy-lee
**Flickr:** flickr.com/doy-lee

## RESUME QR CODE

## WORK EXPERIENCE

**CURRENT** **AOS Group** — **AI Team (aosgrp.com)**
**2020 OCT** AI/Software Engineer

- C++11, AI/Agents/BDI, Qt, Developer Tools, Windows/Linux
- Working on AI technology building developer tools and the API in order to facilitate the ability to coordinate team-like cooperation between intelligent systems via a multi-agent "Belief, Desire and Intentions" (BDI) paradigm.

**2020 OCT** **Loki** — **Blockchain Team (github.com/loki-project/loki/commits?author=Doy-lee)**
**2018 FEB** Blockchain Engineer

- C++14, Boost, Docker/CMake, CI, Cryptography, Open Source, Windows/OSX/Linux/Android
- Derive Service Nodes (SN) via state on Blockchain with custom cryptographic registration, deregistration, payout transactions, P2P behaviour metrics and voting mechanism to remove bad SNs in a distributed network.
- SN Enforced Chain Checkpointing, SN's autonomously vote over P2P, securing blocks and handle conflicting alternative-chains to provide stronger guarantees on the finalized chain.
- Loki Name System (DNS via Blockchain). DNS records for wallets, usernames & websites on a privacy Blockchain. Expiration, transfers/updating via private-public key cryptography and an end user API via JSON RPC.
- Implement and transition from Proof of Work to Proof of Stake on a distributed node network, via a commit-reveal scheme generating entropy for blocks.
- Dev-ops, platform builds, distribution, time-critical fixes & updates in production.
- Fix/improve/create test tooling for the Service Node network including a re-write of the Monero testing framework and integration tests using named pipes over multi-process.

**2017 NOV** **Wargaming** — **Client Tools Team (wargaming.com/en/about/)**
**2017 AUG** Intern/Software Engineer

- C++11, Qt, Jira, Perforce, Plastic
- Working on internal engine for content creation, bug fixing 21 tickets over intern duration.

## SIDE PROJECTS

**CURRENT** **Dqn Library** — **Personal Utility Library C++ (github.com/doy-lee/dqn)**

- Custom memory allocators for the cache, reduce malloc overhead, control over memory model and lifetimes.
- Minimal allocating arrays/strings/builders w/allocator API, stack based variants for cache and minimal overhead.

**CURRENT** **Novel/Kay Engine** — **Interactive Fiction/2D Game Engine C++**

- Side project to build interactive fiction to encourage learning new languages enjoyable.
- Custom IMGUI and Instrumenting Profiler w/Frame Graph, Call Table

**CURRENT** **Raylib SIMD** — **Raylib SIMD Implementations (Rendering) (github.com/doy-lee/RaylibSIMD)**

- Reimplements Raylib's software rendering using SIMD via SSE (and soon AVX)
- Practice implementing SIMD versions of scalar algorithms branchless, resulting in ~4x speed up

**2017** **DTRenderer** — **3D Software Renderer from First Principles (github.com/doy-lee/DTRenderer)**
**.** **DChip8** — **CHIP8 Interpreter (Solo, C/C++, Win32) (github.com/doy-lee/dchip-8)**
**.** **Math Masher** — **Mobile Game (C++, Photoshop, Cocos2dx) (doy-lee.github.io/luneaustralia)**
**2016** **Dengine** — **Basic 2D Engine For Learning (Solo, C++, OpenGL, GLFW, STB, OpenAL) (github.com/doy-lee/dengine)**

## EDUCATION

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