

## SKILLS

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**C,C++ (since 2011):** POSIX, pthreads, Qt, GMP, cmake, openmp, gdb, valgrind, sockets, etc.

**TypeScript, JavaScript (since 2014):** WebAssembly, express, WebGL, webpack, WebSockets, echarts, PM2, NPM, etc.

**Linux:** Daily driver since 2015, managing Linux servers since 2016

**Other Languages:** Python, HTML, CSS, SQL, LaTeX, Haskell, POV-Ray, Spanish, Danish, etc.

**Tools:** Excel, RSS, LaTeX, SVG, git, vim, screen, kdenlive, Wings3D, SketchUp, etc.

## RELEVANT WORK EXPERIENCE

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**Software Engineer**, Information Security Corporation

January 2022-Present

- Joined team working on codebase spanning decades of development with several hundred thousand lines of code
- Worked with layered filesystem driver to transparently encrypt user files using PKI credentials
- Added new, user-friendly UI that integrates with users preferred file managers
- Software used in national security critical applications
- Skills Used: C, C++, Python, Linux, Qt, BASH, RHEL, Packaging & Build Systems, POSIX, PKI, LDAP, CIFS, VMWare

**Freelance Software Developer/Engineer/Consultant**, Upwork

May 2021-September 2021

Performed a variety of work for many clients while in college.

- Skills used: TypeScript, C, C++, Python, BASH, Haskell, AWS, SQL, Webpack, ORM, System Administration
- Achievements: Upwork's "Rising Talent" and "Top Rated" badges

**Software Developer**, CAEMate

June 2020-December 2020

- Helped Refactor Large Codebase spanning 5 years of development; Worked on 3D editor for [westatix.com](http://westatix.com)
- Skills: JavaScript, WebGL, WebAssembly, jQuery, C++, Linux, Docker, git, threejs, MVC

**Senior Software Engineer**, StrattyX

April 2019 – December 2019

- Reached out to by CEO with a name, logo and dream to democratize algorithmic trading
- Led development of company's software
- Designed and implemented a novel distributed language system to power the company's product
- Built out product at Harvard Innovation Lab; Pitched company at TechCrunch Disrupt 2019 where we were finalists
- Skills used: Startups, marketing, SWE, PM, AWS, SQL, Node.js, React Native, Python, REST, finance, NLP, etc.

**IT Apprentice**, Macon-Bibb Board of Education

August 2016 – May 2018

**Summer Camp Councillor**, Mercer University Creative Computer Camps

2016 - 2018

## PROJECTS

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**Postfix Haskell**, [github.com/dvtate/postfix-haskell](https://github.com/dvtate/postfix-haskell)

2020 – 2023

- A low-level, stack-based, pure-functional language that compiles to WebAssembly
- Moving, Tracing Garbage Collector Written by hand in WebAssembly

**SCL**, [github.com/dvtate/SCL](https://github.com/dvtate/SCL)

2020

- A bytecode-compiled language with an comfortable syntax focused on asynchronous operations
- Custom Parser, Compiler, VM, Garbage Collector, Event Loop, etc. written in C++

**Corki Discord Bot**, [corki.js.org](http://corki.js.org)

2017 - 2019

- A Discord chat bot with over 200k users, a language-based rule-engine, web-portal, RSS forwarding, game integrations, etc.

**Websites**

- [ResearchInEnglish.com](http://ResearchInEnglish.com) (2023) A website that uses AI to write news articles about open-source research
- [XSS.software](http://XSS.software) (2022) A distributed, serverless cloud powered by browser tabs
- More: [stonks.bodge.dev](http://stonks.bodge.dev) (2021), [xTie.net](http://xTie.net) (2020), [corki.js.org](http://corki.js.org) (2019), [robobibb.github.io](http://robobibb.github.io) (2017), [old.dvtt.net](http://old.dvtt.net) (2014)

## EDUCATION

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**Illinois Institute of Technology**

Chicago, IL

B.S. Computer Science (GPA: 3.4)

August 2018-December 2021

- 2018 Deans List, Heald Scholar
- Programming Lead for NASA Robotic Mining Competition Team (2019-2020)
- Computer Science Teaching Assistant (2019)

**Howard High School**

Macon, GA

Foreign Language Pathway; GPA: 3.9 (top 5%); 11 AP classes

August 2014-May 2018

- Highest Average: AP Computer Science, AP World History, AP Chemistry
- Clubs: Robotics, BETA, FBLA, News Team, etc.