

SUMMARY Computer science professional of over 4 years. I have a passion for expanding my expertise in software design, architecture, security, and DevOps. I strive to improve the products and the teams on which I work.

WORK EXPERIENCE *Sandia National Labs: Computer Scientist R&D* June 2017 - Present
Full stack developer on a team providing solutions for authentication, authorization, messaging, caching, and more. Languages: Java and Typescript. Frameworks: Spring Boot and Angular.

- Lead designer and developer of a custom OIDC/OAuth2.0 service, that has been adopted by numerous applications for user authentication/authorization and inter-service authorization.
- Lead designer and developer of a custom RBAC authorization service. Included a web-based UI for role/resource management and various libraries for integration into other applications.
- Involved in deployment and maintenance of the COTS software Consul, Vault, Artemis, and Ignite. Involved in customer support for the numerous applications using these services.

Full stack developer on a team redesigning an inventory tracking web application. Languages: Java, Typescript, and PL/SQL. Frameworks: Spring Boot and Angular.

- Redesigned a legacy Oracle database schema to support complete history of inventory. Led the migration effort for existing data.
- Prototyped a new authentication scheme which grew into the independent project mentioned above.
- Developed significant portions of the user interface. Collaborated on a cross-project team, comprised of various applications in the shared suite, to design a common UI/UX.
- Frequently interacted with customers and management to present new solutions and refine business practices.

CSX Corporation: Intern Jan. 2013 - May 2013
Analyzed GPS data of CSX train locations to estimate customer service times on a rail network, using a self-implemented clustering algorithms. Languages: Python and SQL.

OTHER PROJECTS *DR-Planner* Doctoral research, Independent (C++)
(see resume.tabaker.com) Designed a GUI and the underlying algorithms to quickly find realizations of rigid, 2D bar-joint graphs. Independently coded and architected.

- Implemented self-created algorithms, suitable for industry CAD software.
- Lead author on scientific paper, published in CAGD.

EASAL Doctoral research, ~10 contributors (C++)
Contributed to software that explores the assembly landscape of molecules (and other physical structures.)

- Led the restructuring and refactorization of this project; this allowed for accelerated development with undergraduate students.
- Contributed to the user guide and feature summary, published in TOMS.

Game Engine Hobby project, Independent (C++, Lua)
Features: sophisticated software architecture patterns, multi-threading, and a deep understanding of the OpenGL 4 pipeline.

EDUCATION ***M.S. in Computer Science*** May 2017
University of Florida, GPA: 3.96
Presented at conferences and authored a paper in the field of combinatorial geometry.
Taught undergraduate classes.

B.S. in Nuclear Engineering May 2013
University of Florida, GPA: 3.99
Minors: Computer Science, Astronomy, Pre-med track

SKILLS Web design, software architecture, authentication, authorization, containerized deployment.
 Languages (Strong): Java, Typescript, PL/SQL.
 Languages (Moderate): C/C++, Python.