

Objective

Seeking a Senior Software Engineer position where I can accomplish career milestones and pursue knowledge with a passion to grow. I would to get involved in the emergency response and services industry.

Education

Bachelor of Computer Science, Minor in GIS - University of North Carolina, Chapel Hill, NC 2018 - 2021

Software Skills (Soft Skills): Adaptability, Creativity, Deductive/Inductive Reasoning, Honesty, Teamwork

| Programming Languages | Python (4 y) | JavaScript(4 y)/TypeScript(3 y) | Other Languages |
|---|--|--|--|
| | <ul style="list-style-type: none">- Anaconda, PyCharm- ArcPy, PyQGIS, PyQt- GDAL,(Geo)Django- unittest, pytest,sphinx | <ul style="list-style-type: none">- Vue (2 y), React (1 y), Angular (1 y)- ORM, Express, jQuery, Node, D3.js- Webpack, Babel, JSDoc, ESLint, Jest- SSR, CQRS, Google Analytics, Leaflet | <ul style="list-style-type: none">- HTML & SCSS/CSS(4 y.)- Java (3 y), SQL(3 y)- C#,C++ (2 y), R (1 y)- WebAssembly (1 y) |
| Experienced With | Frontend | Backend | Dev Ops |
| | <ul style="list-style-type: none">-Nuxt/Vue+Pinia- React+Redux- Angular+NgRx | <ul style="list-style-type: none">- PostgreSQL- ASP.NET Core- SQLite- Apache, Nginx- Client-side DBs | <ul style="list-style-type: none">- Git/Hub/Lab- Jira+Confluence- Gradle+Maven- CMake- Docker+Kubernetes |
| Platforms/Services | | | |
| <ul style="list-style-type: none">- ArcMap, ArcGIS, QGIS- Potree, Mapbox GL, Cesium- Android (Java)- Azure (AKS), AWS (S3)- NOAA, USGS, Public GIS- Cloudflare, Salesforce | | | |

Professional Experience

Mapping Software Engineer @ DEKA Research & Development (Manchester, NH) Sept 2021 - Aug 2023

- As a team of 2 engineers, we designed and developed point cloud processing tasks using *PCL* and created DAGs with *PDAL* pipelines to be deployed with *Airflow*, then be delivered to tactical project teams for field tests. To handle billions of points we parallelized tasks and leveraged cloud storage & GPUs for memory & computation.

Algorithms & Data Structures : Voxels, K-D Tree, Octree, Occupancy Grid, Global/Local Registration

- I maintained integration test suites in *Groovy* using *Spock* for relational spatial database for multiple releases.
- I was tasked with documenting and overseeing the use of COTS software for mobile mapping processing and integrating into the existing pipeline. 3 coworkers and I collectively processed over 25 sq. miles of diverse terrains.
- During my 2nd year, I was moved to a team of five engineers building a full-stack web app from scratch. We developed the front-end using *Vue*, back-end using *ASP.NET*, and production branches are deployed on *Kubernetes* clusters then a cloud engineer manages on *AKS* enabled by *Terraform*. Features included video/audio streaming, a real-time alert system, interactive web maps, on-demand routing & route validation, unit & integration test suites, and functional mgmt.

Technologies : Linux/GNU, WebDriver, WebSocket, WebRTC, SLAM, Mobile Mapping System, GNSS-Aided INS, VSCode, PyCharm

Customer Success Intern @ nCino, inc. (Wilmington, NC) Jun 2019 - Sept 2019

- Professional experience mentored by a variety of employees from customer success, marketing, & product dev.
- Tasked with learning domain level knowledge of how *nCino* & *Salesforce* is implemented. Work included writing test suites, consumer loan form generation, use case testing, bug fixes, and writing custom Apex & Visualforce logic.
- Contributed to customer support on nCino's *consumer loan origination system* and involved in tech consultations.

Technologies : Diagrams, Apex Tests & Triggers, Platform APIs, Consumer Loans, SOQL/SOSL, Visualforce, Trailhead

IT Intern & Database Admin @ Hardee Hunt & Williams (Wrightsville Beach, NC) Jan 2014 - Jun 2016

- Through John T. Hoggard High School, I initiated a CTE Internship for experiential credit hours managing the mailing list database and use graphic design softwares and tools to publish and market flyers, postcards, and more.

Technologies : Mail Management, Adobe Photoshop/InDesign, CSV, Microsoft Excel, Python Scripting, PowerShell

Projects & Involvement & Interests

UNC-CH Software Engineering Lab: Neural Network Playground - 2020

- On team of 4 students we scripted data visualization HTML reports for UNC-CH graduate research analysis.
- SubFlow: A Dynamic Induced-Subgraph Strategy Toward Real-Time DNN Inference and Training
- Fast and Scalable In-memory Deep Multitask Learning via Neural Weight Virtualization (Lee, Seulki & Nirjon, Shahriar, ed.)

Technologies : D3.js, React, Figma, CUDA, TensorFlow, Jira

UNC-CH Mobile Sensing & Inference Systems - 2020

- For the final project I was tasked to develop an mobile app that implements a pre-trained image classification model, an embedded database, and must run a audio player in the background and track & visualize user data.

Technologies : Android Studio, SQLite, TensorFlow Lite, Gradle, Adapter

Carolina AR/VR: Contributions to Franklin Street AR Art Gallery - 2020

UNC Web Development Club: Contributions to Headless CMS for Organization site - 2020

Other : Intermediate German Speaker, Sigma Phi Epsilon, FOSS+Public Benefit, Dog(Pug), Retro Arcade Games, Cooking, Ocean