

CHACE NIELSON

Software Engineer | Full-Stack Developer

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Work Experience

Alberta Tomorrow – Software Developer

Jan 2024 – Current

- Developed an educational web app for sustainable land use, empowering **10,000+ Alberta students** to analyze current and future land use scenarios.
- Designed interactive **data visualizations** to track user demographics, enhancing stakeholder presentations and data-driven decision-making.
- Improved map and data visualization, increasing user engagement by 30% with clearer insights and interactive elements.
- **Tech Stack:** *Vue.js, HTML, CSS, Python, AWS, Unity.*

Glass Gecko Games – Game/Web Developer

May 2024 – Current

- Designed and implemented engaging game mechanics, collaborating with **cross-functional teams**.
- Developed and launched the company website, attracting **200+ weekly users**.
- **Won 1st place in the GMTK 2024 Game Jam** with [Scale the Depths](#), which has been **played 60,000+ times**.
- **Tech Stack:** *Unity, Plastic SCM, C#, React and Tailwind.*

U of C Geothermal Center – Lead Software Developer

May 2022 – Jan 2024

- Led development of a geothermal web app, analyzing drilling data from New Mexico, Germany, and Sweden.
- **Managed a team of 10 developers**, overseeing full-stack development and project execution.
- Received the **Intern of Merit** award for exceptional performance.
- Led code reviews and interviewed over 10 candidates for new developer roles.
- **Tech Stack:** *React.js, Tailwind, FastAPI, PostgreSQL, Python and Docker.*

Education

Bachelor of Science in Software Engineering

University of Calgary

- Schulich School of Engineering | 3.6 GPA | With Distinction.

May 2024

Projects

Drillbotics – Functional Mini Drill Rig

chacenielsen.com/?project=drillbotics

Designed and built a functional mini drill rig and real-time GUI, securing **2nd place** in the international Drillbotics competition. Integrated embedded systems, circuit design, and manufacturing processes into the project.

- *Python, Plotly Dash, Embedded Systems, Circuit Design, Manufacturing.*

PageFlow Library – Full Stack Application

chacenielsen.com/?project=library

Developed a scalable full-stack document management app with **AWS** cloud storage, supporting PDFs, Word, JSON, and HTML. Implemented **authentication**, user management, login popups, favourites and comment sections.

- *Next.js, Tailwind CSS, Django, PostgreSQL, AWS S3, RDS.*

Voice Identification – GUI and ML

chacenielsen.com/?project=voice-identification

Developed a voice identification system using **machine learning** to recognize and verify individuals. Built a GUI for analyzing 80 comparisons across 9 audio sources with GMM and CNN to enhance accuracy.

- *Python, Plotly Dash, Machine Learning, GMM, CNN*

Technical Skills

Frontend

- Next.js
- React.js and Vite
- Vue.js
- JavaScript / TypeScript
- Tailwind / CSS
- Responsive Design

Backend

- REST API
- Express.js
- FastAPI
- Django
- PostgreSQL
- MySQL
- MongoDB
- Node.js

DevOps

- AWS / S3 / RDS
- Docker
- CI/CD
- Machine Learning
- JSON

Engineering

- Python
- Git/GitHub
- Java
- C/C++
- Hadoop
- Apache Spark

Game Development

- Unity
- C#
- Blender
- Plastic SCM

Interests

- Snowboarding
- Music
- Rock Climbing

Volunteering

- Homes of Hope in Tijuana, Mexico
- Cochrane Eagles Basketball Association - Coach
- Bow Valley High School Basketball – Coach