

# CHACE NIELSON

Software Engineer | React, Python, Unity, C++

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## Work Experience

**Alberta Tomorrow** – Software Developer

Jan 2024 – Current

- Developed and maintained a web application for sustainable land use, now used by over 10,000 students in Alberta.
- Enhanced data and map visualization, increasing user engagement by 20% through improved clarity and faster interactive elements.
- Collaborated with stakeholders to ensure timely project delivery.
- Technologies: *Vue, HTML, CSS, Responsive Design and AWS.*

**Glass Gecko Games** – Game/Web Developer

May 2024 – Current

- Engineered game mechanics, led web design, and collaborated with cross-functional teams to develop and maintain 3 games and the company website.
- Launched company website, increasing traffic by 30 users weekly.
- Won the GMTK 2024 Game Jam with *Scale the Depths*, out of 7700 entries, engaging over 4000 players.
- Technologies: *Unity, C#, React and Tailwind.*

**UofC Geothermal Center** – Lead Software Developer

May 2022 – Jan 2024

- Led development of a web app for geothermal systems, analyzing drilling data in New Mexico and Germany.
- Directed a team of 8 developers, successfully delivering the project.
- Spearheaded analysis tools capable of processing and visualizing 2+ months of 1-second interval drilling data.
- Awarded the Intern of Merit for exceptional performance.
- Conducted code reviews and interviewed 10 candidates for new roles.
- Technologies: *React, 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 and GUI [chacenielsen.com/project/drillbotics](https://chacenielsen.com/project/drillbotics)

Designed a mini drill rig and real-time GUI with the Drillbotics team at the University of Calgary, earning second place in the competition.

- Technologies: *Python and Plotly Dash.*

**CO<sub>2</sub> Separation** – Unity Sim and Prototype

[chacenielsen.com/project/capstone](https://chacenielsen.com/project/capstone)

Engineered a physical prototype and simulation for a CO<sub>2</sub> separation and energy storage system leveraging deep ocean pressure.

- Technologies: *Unity, C# and Blender.*

**Voice Identification** – GUI and ML

[chacenielsen.com/project/voice-identification](https://chacenielsen.com/project/voice-identification)

Built a voice ID system and GUI, analyzing 80+ comparisons across 9 audio sources using GMM and CNN algorithms.

- Technologies: *Python and Plotly Dash.*

**Photo App** – MERN Stack Application

[chacenielsen.com/project/photo-app](https://chacenielsen.com/project/photo-app)

Created a full-stack photo gallery application featuring user authentication and account management.

- Technologies: *React, Express, MongoDB and Node.*

## Technical Skills

### Frontend

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

### Backend

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

### DevOps

- AWS
- Docker
- CI/CD

### Engineering

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

### Game Development

- Unity
- C#
- Blender

## Interests

- Snowboarding
- Music
- Rock Climbing

## Volunteering

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