

# SOORAJ NAIR

Software Developer

## EXPERIENCE

### Software Developer Research Assistant May 2024 - Present

Visual and Analytic Computing (VAC) Lab, St.John's, NL

- Leading the design and implementation of a 3D holographic visualization platform using Unreal Engine and C++, converting complex global wind datasets into interactive simulations.
- Analyzing the impact of atmospheric dynamics on flight trajectories, offering data-driven insights to enhance aviation safety and operational efficiency.
- Collaborating with researchers to apply cutting-edge visual computing techniques, integrating real-time wind data to create immersive environments that aid in decision-making for aviation professionals.

### Python Developer Intern May 2023 - Aug 2023

Algorithm Pvt. Ltd., Kochi, Kerala, India

- Developed scalable backend systems using FastAPI, improving application performance and reducing response times by 20%.
- Contributed to the full software development lifecycle, from design and testing to deployment, ensuring the delivery of reliable Python-based applications.
- Collaborated with cross-functional teams to implement RESTful APIs, facilitating seamless communication between backend services and frontend applications.

## EXTRACURRICULARS

### Hack Frost NL Mar 2023

Memorial University of Newfoundland, NL

- Engineered a Webpage Analyzer ChatBot, a web app that efficiently summarizes and retrieves specific information from web pages.
- Leveraged Python, Streamlit, LangChain, and OpenAI GPT-3.5 to build and deploy the solution.

### SSFK High School Science Festival Jan 2018

Trivandrum, Kerala, India

- Won the district-level award for the best theme-based science project.
- Designed and developed an SOS Android app, improving emergency communication systems and usability for real-world applications.

## PROJECTS

### UX Designing Jan 2024

- Developed a 3D zombie shooting game in Unreal Engine, focusing on UI design and visual effects to enhance user experience.
- Created an intuitive interface and engaging visual effects, improving gameplay immersion and usability.

### Cybersecurity Penetration Testing Sep 2023


- Simulated cyber attack scenarios by exploiting vulnerabilities in a test environment, achieving administrative access and uncovering three critical security gaps that informed the development of an updated firewall configuration.
- Utilized Linux cloud server, Python, and C to develop and deploy the attacks, simulating real-world cybersecurity threats and defenses.

### Online Student Portal Jan 2023

- Developed both the client-side and server-side of a dynamic student portal web application, facilitating course management and student information access.
- Utilized HTML, CSS, jQuery, JavaScript, and Node.js with Express.js for robust application development, and Mocha.js for unit testing to ensure code quality and functionality.


## CONTACT

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## SKILLS

### Hard Skills:

- Programming (Advanced)
- Debugging (Experienced)
- Software Design
- Software Optimization
- Web Development
- Game Development
- Artificial Intelligence (AI)
- Data Science
- Research

### Programming Languages:

- C / C++
- Python
- Java
- JavaScript
- HTML
- CSS

### Tools and Software:

- Unreal Engine (Blueprints)
- Blender
- Jupyter Notebooks
- MongoDB
- MySQL

### Frameworks & Libraries:

- Node.js
- Next.js / React.js
- FastAPI / RESTful API
- Tailwind CSS
- SFML (Graphic library)
- Panda
- LangChain (LLM)

## EDUCATION

### Memorial University of Newfoundland

Bachelor of Science (Honours)

Computer Science

St.John's, NL

Sep 2020 - Dec 2024

### Awards:

- Dean's list 2023 and 2024