Rishan Biju

Education

Virginia Tech

Blacksburg, VA

Bachelor of Science in Computer Science

Expected Graduation Date: December 2026

• **GPA**: 3.88

• Relevant Coursework: Software Design and Data Structures, Discrete Math, Computer Organization 1

Technical Skills

• Languages: Python, Java, JavaScript

• Developer Tools: GitHub, Git, Jupyter Notebook, Postman

• Technologies: FastAPI, Flask, Express.js, Node.js, Next.js, React.js, TypeScript, Docker, AWS (SNS), MongoDB, Firebase, Redis, PostgreSQL, Pandas, Playwright, Selenium, Tailwind, Bootstrap

Technical Experience

Hume Center at Virginia Tech

January 2024 - Present

Undergraduate Researcher

Blacksburg, VA

- Created Python scripts to extract data on companies affected by ransomware attacks from dark web sources
- Leveraged **Pandas** to analyze file extensions commonly found on Dark web platforms, facilitating a detailed categorization and breakdown of their prevalence

Spanalytics

June 2023 - August 2023

Software Engineer Intern

Glen Allen, VA

- Developed secure backend endpoints using Express.js, enabling seamless retrieval of user files
- Utilized **JavaScript** to enhance user experience by efficiently fetching data from backend endpoints, ensuring optimal performance
- Managed **Redis** database server, maintaining compatibility with PANalyzr software by accurately storing and promptly retrieving version numbers for user inputs
- Optimized front-end data validation by cross-referencing user inputs with Redis data, achieving accurate results and enabling swift user interactions, leading to a 50% reduction in compatibility-check latency

Spanalytics

June 2022 - August 2022

Cybersecurity Intern

Glen Allen, VA

- Conducted penetration testing on a variety of network devices, including routers and switches, using Linux-based tools such as **Nmap**
- Validated the functionality of network devices by using **Wireshark** to analyze network traffic and configure data onto a spreadsheet, resulting in a 15% reduction in network downtime

Projects

SmartCite | Next.js, TypeScript, MongoDB, Docker, Playwright, Tailwind

June 2024 - Present

- Developing a Chrome Extension using **Next.js** to enable users to enter any website URL to recieve a 5-sentence summary, citation of their preferred style, and related articles
- Implemented personalized summaries using **Hugging Face LLM** and utilized **Playwright** to scrape text for over **100+** websites and generate accurate summaries/citations tailored to users
- Built a robust authentication system utilizing JWT, Google OAuth 2.0, and MongoDB to generate new JWT tokens for authorization and storing user credentials
- Containerized application using Docker to seamlessly deploy code to production

COVID Data Analyzer | React.js, Firebase, Bootstrap

January 2023 - April 2023

- Developed a **React-based** COVID data web app, empowering users to access and visualize state-specific COVID data via widgets and used Firebase to implement two-factor authentication
- Utilized WHO Covid Rest API, effectively visualizing data trends using APEX Charts
- Integrated AWS SNS for real-time SMS notifications, delivering the latest COVID data insights directly to users
- Received scholarship from school board for project impact and design out of 19 students