

# Bulut Gözübüyük

United States | bulutgozubuyuk@gmail.com | bulutg.com | github.com/bulutg

## PROFESSIONAL SUMMARY

MS student in Computer Science with a strong foundation and hands-on experience in software engineering, cloud computing, and back-end development. Proficient in data structures and algorithms, with expertise in designing and deploying scalable services and optimizing system performance. Successfully delivered real-world projects that are deployed and operational.

## EDUCATION

**Master of Science, Computer Science**, Clemson University Jan 2023 — May 2025

- **GPA: 3.87/4.0, Related Coursework:** Object-Oriented Software Design, Cloud Computing, Cybersecurity

**Bachelor of Science, Computer Engineering**, Bilkent University Aug 2019 — June 2022

- **Related Coursework:** Machine Learning, Data Science

## PROJECTS

**Automated AI Recipe Generator.** Developed an end-to-end system to automate content creation by scraping Google Trends data with Google Cloud Run Jobs. Leveraged OpenAI's API to generate dynamic content and visuals, seamlessly updating a Supabase database. Built a responsive SvelteKit frontend powered by a Cloudflare Worker, serving as a distributed proxy and optimizing performance by reducing database requests by up to 99% with Cloudflare cache and TypeScript. Demonstrated proficiency in cloud-based automation, full-stack development, and scalable performance optimization.

**Android Automotive Privacy Analysis.** Developed a research tool to analyze privacy risks in the automotive sector, combining Python (Flask) for the back end and React.js for the front end. Automated the privacy impact assessment for over 100 million vehicles by reverse-engineering Android firmware and using Frida for dynamic analysis. Conducted data analysis to uncover trends and actionable insights, with results published here.

**Wildfire Prediction with Machine Learning.** Developed an SVM classification model to predict wildfire occurrences with 93% accuracy by analyzing surface temperature and NASA satellite data, while minimizing false negative rates.

## EXPERIENCE

**Research Assistant** Jan 2023 — Jan 2025  
Clemson University *Clemson, South Carolina*

- Lead the Android Automotive Privacy Analysis Tool Project. Developed React.js on the front end and Flask on the back end. Assessed the privacy issues of over 100 million vehicles automatically. Published at 2024 NDSS VehicleSec.
- Developed and deployed an innovative learning platform using Nginx, Docker, MySQL, and Flask on AWS EC2.
- Created CI/CD pipelines (workflows) with GitHub Actions for automated testing and deployment.
- Conducted research aimed at enhancing the security of Controller Area Network (CAN bus) systems in multiple projects.
- Published B. Gozubuyuk, et al., "An Overview of Security in Connected and Autonomous Vehicles" at AIOtSys 2023.

**Back-End Developer Intern** June 2022 — July 2022  
Trendyol *Istanbul, Turkey*

- Developed microservices using Go, Docker, and PostgreSQL to enhance the Trendyol classified ads platform.

**Software Engineer Co-Op** Dec 2021 — June 2022  
MilSOFT & Tubitak *Ankara, Turkey*

- Designed efficient algorithms for processing Tactical Data Link messages following NATO standards and Agile principles.
- Developed unit tests using C++ and Python to ensure code quality and reliability.

**Software Engineer Intern** June 2021 — Aug 2021  
Siyah R&D *Ankara, Turkey*

- Developed a multithreaded, object-oriented TCP client-server library using C++. Utilized POSIX threads to enable simultaneous execution and efficient resource management.
- Implemented efficient networking and messaging modules by utilizing optimized data structures, resulting in a 30% reduction in memory usage and a 50% increase in CPU performance.

**Software Engineer Intern**  
Pardus

Aug 2020 — Sept 2020  
*Ankara, Turkey*

- Implemented an authentication (Linux PAM) module in C to facilitate network login for the Pardus Debian distribution.

**Cybersecurity Software Engineer Intern**  
STM

Aug 2019 — Sept 2019  
*Ankara, Turkey*

- Built an in-house Forensics tool using Python that automated manual tasks, reduced human workload and boosted efficiency.

## LEADERSHIP

---

**Business Talks in Berlin Event.** Organized visits to over 12 distinguished Berlin companies, including Microsoft, KPMG, Siemens, Blacklane, and Ableton, allowing students to connect with industry experts and gain diverse insights.

**Co-Founder of Bilkent University Cyber Security Student Club.** Educated 50+ members on cybersecurity principles, practices, and applications. Organized workshops and sessions with industry professionals to provide practical learning.

## SKILLS

---

**Programming Languages**  
**Technologies**  
**Certifications**

Python, C/C++, Java, Javascript/Typescript  
Git, Unix/Linux, Docker, Computer Networks, TCP/IP, SQL, CI/CD, Generative AI, CAN  
AWS Certified Solutions Architect (SAA) - Associate, AWS Certified Cloud Practitioner