NIKOLA GEORGIEV

Address: Sofia; Zona B-5; +359 88 287 5176
nikola.ch.georgiev@gmail.com
LinkedIn

PROFILE

I am a resourceful and ambitious university student with excellent analytical and mathematical skills. I possess strong organizational abilities, with proven success managing multiple academic projects and volunteering events. As a dedicated team player, I am committed to continuing my academic pursuits at the highest professional level, specifically within the fields of Computational Finance and Data Science.

EXPERIENCE

JUNE, 2024 – PRESENT

JUNIOR SYSTEM ENGINEER, A1 BULGARIA

- Large-Scale Data Analytics: Engineered and deployed an automated alarm analytics framework processing high-frequency data streams from 15,000 base stations nationwide to derive real-time system performance metrics.
- Algorithmic Optimization: Developed sophisticated provisioning logic and monitoring algorithms to ensure seamless hardware-software integration and maximize throughput for site equipment.
- Quantitative Reporting: Designed and implemented automated data pipelines to generate real-time analytical reports, utilizing statistical indicators to track equipment status and system health.
- High-Performance Computing: Writing clean, scalable, and computationally efficient code in Python, Java, and PL/SQL, focusing on optimizing back-end queries and system performance for large-scale production environments.

JANUARY, 2024 – PRESENT

C++ PROGRAMING TUTOR, AUBG

- Algorithmic Instruction: Deliver C++ tutorials twice a week, covering quantitative logic, object-oriented design, and problem-solving strategies.
- Data Structures: Give live coding sessions on topics including memory management and data structures, essential for high-frequency computational tasks.
- Code Optimization: Helped students to resolve individual questions, debug code, and enhance algorithmic programming efficiency.

JUNE, 2023 – SEP, 2023

NETWORK AUTOMATION INTERN, A1 BULGARIA

- API Development: Engineered Python scripts to interact with the API of a newly designed defensive DDoS system in order to produce a live report for ongoing attacks.
- Process Automation: Developed multiple programs focused on Cisco ASA to FortiGate migration and scripted fixes for VRRP initial delays across the MPLS network.
- Data Management: Automated the standardization of interface descriptions in the L2 services layer across all devices in the MPLS network

EDUCATION

SEP, 2022 – PRESENT

AMERICAN UNIVERSITY IN BULGARIA, BLAGOEVGRAD

- Double Major in Computer Science & Business Administration; Minor in Mathematics
- Computer Science Diploma Thesis: Real-Time DDoS Detection System
  - Developed a high-performance detection engine using K-Nearest Neighbors (KNN) and One-Class Support Vector Machine (Oc-SVM), implemented entirely from scratch in C++ to ensure maximum computational efficiency.
  - Integrated the engine with a FastAPI-based REST API to facilitate seamless real-time data ingestion and reporting.
  - Conducted rigorous testing using GNS3 to simulate local network environments and validate the system's ability to identify and mitigate attack vectors under load.
- Relevant Course Work:
  - Algorithms, Software Engineering, Programming in Python, C++ Programming, Data Base Systems, Corporate Finance I , Corporate Finance II, Investment Portfolio Management, Risk Management, Numerical Analysis, Differential Equations, Linear Algebra, Calculus I, II & III

SEP, 2017 – MAY, 2022

FIRST PRIVATE MATHEMATICAL HIGH SCHOOL, SOFIA

- Intensive curriculum focused on building a strong foundation in analytical thinking and mathematical theory.

PERSONAL PROJECTS

- Algorithmic Trading & Regime Discovery Engine:
  - Developed a Python-based end-to-end backtesting and live-trading system integrated with Interactive Brokers, Alpaca, and Binance APIs. Implemented EGARCH and Hidden Markov Models (HMM) to quantify asymmetric volatility and identify latent market regimes, enabling dynamic strategy adaptation to structural market shifts.
- Fundamental Analysis & Portfolio Allocation Engine:
  - Developed a quantitative framework in python for S&P 500 stock selection utilizing fundamental analysis and sector-specific Z-score normalization to identify undervalued assets.

SKILLS & HOBBIES

- Programming & Scripting: Python, SQL (PL/SQL), Java, C++, MATLAB, R.
- Data & Development Environments: PyCharm, SQL Workbench, NetBeans, Visual Studio.
- Network Simulation & Infrastructure: GNS 3, Cisco Packet Tracer.
- Quantitative & Analytical Competencies: Mathematical Maturity; Mathematical Analysis; Statistical Modeling.
- Professional & Interpersonal Skills: Conflict Resolution; Collaborative Teamwork; Management & Direction
- Extracurricular Interests: Skiing, Hiking, Swimming, Chess, Travelling