Nikola Istvanic

istvanic.nikola@gmail.com | (412) 736-0806

EDUCATION

GEORGIA TECH

MS in Computer Science
Computing Systems
May 2023
Cumulative GPA: 4.0
Highest Honors

BS in Computer Science
December 2018
Cumulative GPA: 3.64
Highest Honors

LINKS

github.com/NikolaIstvanic
linkedin.com/in/nikola-istvanic/

SKILLS

PROGRAMMING

C
C++
Rust
Python
Java
git
Linux
Arduino
Raspberry Pi

SPOKEN LANGUAGES

English - fluent
Serbo-Croatian - fluent
Russian - advanced

COURSEWORK

GRADUATE

High Performance Computer Architecture
Computer Networks
AI for Robotics
Machine Learning
Software Design
LLVM

UNDERGRADUATE

Advanced Operating Systems
Compilers
Processor Design

EXPERIENCE

AMAZON LAB126 | Embedded Software Engineer II

May 2022 - Present | Austin, TX
- Own device resource management component, handling RAM quotas, thread scheduling
- Designed, implemented API to query device storage at partition and application levels
- Onboarded, trained team's new hires and interns. Maintain an active mentorship role
- Developed ReactNative APIs for several core operating system components
- Created update mechanism for application time zone, language, localization, and theming

AMAZON LAB126 | Embedded Software Engineer I

October 2020 - May 2022 | Austin, TX

- Developed C, C++ APIs for access-controlled key-value store for operating system
- Developed application internationalization and asset resolution API
- Optimized C++ weight-based file ranking algorithm, improving performance by 6x
- Implemented pub/sub C API in firmware of embedded Linux and RTOS devices
- Reduced firmware framework publish API call execution time by 93.6%

LAWRENCE LIVERMORE NATIONAL LABORATORY | Software Engineer

August 2019 - May 2020 | Livermore, CA

- Developed data capture code for embedded C++ space flight simulation software
- Created interface with camera devices, allowing for continuous streaming of image data
- Implemented multithreaded producer-consumer for capturing and processing of data
- Improved modularity and cache usage of linear algebra library, reducing runtime by 50%

CISCO SYSTEMS | Software Engineer Intern

May - August 2018 | San Jose, CA
- Added concurrency handling for Linux kernel device driver in distributed storage system
- Balanced interrupt spread to increase processor affinity and improve cache utilization
- Improved driver performance by 225% over production code

JP MORGAN CHASE & CO. | Technology Analyst Intern

June – August 2017 | Columbus, OH
- Developed router configuration file updating automation tool
- Eliminated manual process of upgrading routers with Python script
- Configured Cisco switches and routers to connect wired devices to company

RESEARCH

GT SPACE SYSTEMS DESIGN LABORATORY | Research Assistant

August 2017 – May 2018 | Atlanta, GA
- Developed software for fully autonomous satellite communications ground station
- Created Python script to control antenna movement to track satellite movement
- Designed scheduling algorithm to maximize number of satellites communicated with

GT CENTER FOR RELATIVISTIC ASTROPHYSICS | Research Assistant

January – May 2017 | Atlanta, GA
- Created firmware for embedded device on temperature-controlled telescope
- Developed C++ API to convert raw sensor resistance readings to temperature values
- Implemented Python serial console to display temperature output from sensors