

# SAAJAN MASLANKA

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## PERSONAL STATEMENT

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I am a driven and highly skilled engineer able to tackle complex and ambiguous problems. I have a strong background in implementing business logic in real-time systems.

## EDUCATION

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**Arizona State University**, Tempe, Arizona – Summa Cum Laude 2021 – 2023  
B.S. in Mathematics and B.S. in Computer Science (CS)

**Chandler-Gilbert Community College**, Gilbert, Arizona – High Distinction 2014 – 2021  
A.A. in Mathematics and A.S. in Computer Science (CS)

## SKILLS

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- Programming: Rust (Sync & Async), C++, C, C#, TypeScript (React), Python, Java, Intel DPDK
- Computer Science: Algorithms, Data Structures, Automata Theory, Complexity Theory
- Mathematics: Proofs, Group Theory, Linear Algebra
- Public Speaking: Host seminar talks to audiences of 200+

## EXPERIENCE

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**Amazon – Project Kuiper** | Software Development Engineer 1 May 2024 – Present  
Designed, developed, tested, and supported cross-team integration of real-time networking software in Rust

- Designed and implemented performant fixed-work networking libraries to improve TCP performance by more than 100% on lossy and high-jitter networks
- Designed and implemented metrics tooling & rate limited logs to save hundreds of developer hours in debugging.
- Implemented multi-tenant virtual networks using AWS services

**Amazon – Project Kuiper** | SDE Intern Summer 2022 & Summer 2023  
(2022) Designed and developed testing and simulation software to validate LEO satellite broadband traffic algorithms

- Implemented multi-threading with Rust to allow real-time TCP/UDP traffic at 5+ GB/s in the simulator
- Developed a front end framework in Python for designing automated and scriptable Iperf tests on the simulator
- Ensured architecture was highly extensible for future development

(2023) Designed and developed modern lightweight packet classification software to ensure customer broadband experience.

- Designed a highly modular decision tree based packet classifier with support for on-the-fly configuration
- Utilized the Intel DPDK platform to provide fast access to packets on the NIC
- Achieved latency of tens of microseconds across the packet classifier

## PERSONAL PROJECTS

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**Origin Discord Bot** Summer 2022  
Created a discord bot to track birthdays in a timezone aware manner.

- Asynchronous multi-threaded architecture scalable to thousands of guilds and records
- Time zone aware birthday tracking, allowing guilds and individuals to customize their experience based on geographic location

**LL1 Lexer and Parser** Spring 2022  
Transform CFG grammars into LL1 grammars and generate C++ code parsing and lexing of these languages

- Generate NFAs to turn a raw string into tokens
- Parse token stream using recursive descent parsing
- Output standardized C++ code based on input grammar