Matias Tejeda Astaburuaga

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EDUCATION

Purdue University **Aug 2019 – May 2024**
Bachelor of Science in Computer Science (GPA: 3.46/4) *West Lafayette, IN*

Relevant Coursework: Python Programming, Object-Oriented Programming, Discrete Mathematics, C Programming, Computer Architecture, Data Structures and Algorithms, Systems Programming, Compilers, Computer Security, Operating Systems, Computer Networks, Embedded Systems, Advanced Memory Allocation

EXPERIENCE

KLog.co **Sept 2024 – Present**
Full Stack Engineer *Santiago, Chile*

- Maintained internal platform serving more than 5000 businesses by improving functionality and managing large data sets
- Fulfilled tasks and collaborated with teammates using Scrum standards

SKILLS

- **Programming:** HTML/CSS, JavaScript/TypeScript, Python, Java, C/C++, ARM/x86 Assembly
- **Frameworks:** React, NextJS, NodeJS, ExpressJS
- **Databases:** PostgreSQL, MongoDB, GraphQL, Prisma
- **Tools:** Git, Linux, AWS, Docker, VSCode, Scrum, DBeaver, Postman
- **Languages:** Spanish, English, Japanese

PROJECTS

Social Media Website | *HTML/CSS, NodeJS, MongoDB, AWS*

- Developed a full-stack web application to implement a social media service where users can create posts or comments, add friends, and modify their profiles
- Implemented a REST API for the frontend that allows CRUD operations on the user database
- Configured an AWS EC2 server for application deployment using Nginx for HTTP reverse proxy and PM2 for load balancing

Fan Controller | *Python, Kotlin, XML*

- Designed and built an embedded system that reads inputs from a digital thermometer and controls a fan's speed accordingly using Pulse Width Modulation for real world dynamic cooling capabilities
- Developed an Android application in Kotlin and XML to implement IoT functionality and wireless access to the fan controller using TCP/IP socket communication

Packet Analyzer | *C*

- Developed a packet analyzer for the Linux operating system that intercepts raw packets from the Network Interface Card and displays relevant information in real time
- Coverage includes each layer of the TCP/IP model such as Ethernet headers, ARP and IPv4 headers, and TCP, UDP, and ICMP headers

Custom UNIX Shell | *C++, Lex, Yacc*

- Developed an UNIX shell that implements a terminal command line which parses and executes user input
- Input can include commands and their arguments, pipes for passing the output of one command as the input for the next, and I/O redirection for files
- Bonus features include handling environment variables, nesting a child shell within a parent shell, and expanding wildcards using regular expressions and recursion