Karl Schober

karl@karl-schober.dev | (864) 979-4087

EDUCATION

UNIVERSITY OF SOUTH CAROLINA

BS in Physics and Mathematics
May 2016 | Columbia, SC
Magna Cum Laude
College of Arts and Sciences
Dean's List (All Semesters)

Minor in Computer Science
Conc. Artificial Intelligence
College of Computer Science and Engineering

LINKS

Github:// **ks3645**
LinkedIn:// **Karl-Schober**
arXiv:// **Karl Schober**

COURSEWORK

UNDERGRADUATE

Computer Science
Unix Tools and Scripting
Artificial Intelligence
Object Oriented Programming

Mathematics
Graph Theory
Group, Field, and Galois Theory

Physics
Experimental Design

SKILLS

PROGRAMMING

Most Proficient:
Rust • C# • Java • Python • Postgres • Javascript & TypeScript • LaTeX

Proficient:
C • C++ • Unix Shell • T-SQL •GraphQL

Familiar:
CERN ROOT • Haxe

Testing:
Cyprus •Jasmine •xUnit.NET •MSTest •Playwright

Frameworks:
WPF •MSMQ •AngularJS •Vue 2 & 3 • ASP.NET Core •React •Next.js

Cloud:
GCP •Cloudflare •AWS S3 •Docker Compose •Azure DevOps •GitHub

PRACTICAL

NIM Instruments
Oscilloscopes
PCB Rework

EXPERIENCE

UPSWING | Remote

Software Developer: Mar 2020 - 2021
Senior Software Developer: 2021 - 2024
Principal Software Engineer: 2024 - Oct 2024

- Scaled hybrid human/AI chatbot product, Ana, to cover total addressable market (up from a previous max of 1000 daily active users) with reliability over >99.99% by refactoring critical components.
- Implemented fuzzy matching algorithms and designed ethical AI for intent detection which increased response automation for messages from 20% to 45% while retaining perfect QOS for end-users.
- Led initiatives for better project level documentation and code standards to improve engineering practices.
- Led development for project to update proprietary backend framework from .NET Framework 4.5 to LTS .NET Core in order to achieve cross platform support, reduce server costs, increase performance, and ensure stability and security
- Led project to implement security best practices and meet compliance standards for TX-RAMP and SOC2
- Member of a volunteer committee for improving company culture by curating training material and planning all-hands events

REDWOOD LOGISTICS (PREV. STRIVE LOGISTICS) | Austin, TX

Software Developer: Apr 2018 - Jul 2019

- Backend developer for LoadRunner, a proprietary C#/WPF application for managing 3rd party logistics workflow. Focused on architecture and API improvements leveraging functional programming paradigms
- Designed a new search engine, providing 100x faster searches for users and a more scalable back-end implementation
- Designed a new document generation framework to replace Crystal Reports for generating business documents. This allowed designers to work with a more accessible HTML template interface, and provided a more easily understandable framework for developers to add future document models.
- Improved engineering practices by contributing to more detailed code standards and pushing for better testing and deployment procedures

RESEARCH

UNIVERSITY OF SOUTH CAROLINA | Independent Study & Senior Thesis

Aug 2015 - May 2016 | Columbia, SC
Worked with Dr. Brett Altschul, studying solutions to a modified version of Maxwell's Equations in order to further characterize an exotic theory.

PUBLICATIONS

[1] K. Schober and B. Altschul. No vacuum cerenkov radiation losses in the timelike lorentz-violating chern-simons theory. 2015.

[2] K. Schober and B. Altschul. No contact terms for the magnetic field in lorentz- and cpt-violating electrodynamics. 2016.