Theodore Butler

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Education

Drexel University – Philadelphia, PA   September 2016 - June 2021
Bachelor of Science in Computer Engineering
   Cumulative GPA: 3.4

Publications

> Paul Liétar, <u>Theodore Butler</u>, Sylvan Clebsch, Sophia Drossopoulou, Juliana Franco, Matthew J. Parkinson, Alex Shamis, Christoph M. Wintersteiger, and David Chisnall.   snmalloc: a message passing allocator.   *2019 ACM SIGPLAN International Symposium on Memory Management*

Experience

Edge & Node – Remote   July 2021 - Present
Software Engineer
> Redesigned & maintain a production system for routing requests across hundreds of 3rd party service providers
> Develop a multi-criteria decision model for delivering high quality of service in a dynamic system, while also managing the explore-exploit tradeoff and maintaining fairness
> Created smart contract for scaling the transfer of funds over time while limiting risk of losing funds to bad actors
> Collaborate with internal & external teams to find the balance between development & maintenance cost, UX, etc.

Aquent LLC – Remote   May - November 2020
Research Software Development Engineer at Microsoft
> Contributed to Project Verona, a research programming language to explore the concept of concurrent ownership
> Designed a novel system for managing back-pressure within the language runtime
> Verified the correctness of the runtime back-pressure design using TLA+

Siemens Corporate Technology – Munich, Germany   April - September 2019
Performance-Driven Parallel Software Research and Development Co-op
> Designed and implemented a framework for measurement and analysis of Industrial Internet of Things protocols
> Maintained IIoT protocol gateway capable of connecting devices on DDS, WAMP, MQTT, and OPC-UA networks
> Developed and presented demonstrations of factory automation technologies using image recognition

Microsoft Research Limited – Cambridge, UK   April - September 2018
Research Intern
> Implemented high performance networking of distributed system framework for secure multi-party computation
> Designed and integrated in-memory representation of distributed key-value store
> Implemented a low-overhead system for sending encrypted network data between untrusted environments and secure hardware enclaves
> Automated continuous integration testing for multiple projects

Projects

Pony Programming Language – Remote   April 2016 - July 2022
Core Team Member
> Created and maintained standard library packages
> Facilitated RFC process for proposing major language changes
> Reviewed pull requests to reduce bugs introduced and ensure best practices
> Created documentation and tutorials for users of the language and standard library
> Maintained tools for release automation and distribution

Skills

Programming Languages & Tools: Rust, Pony, C, C++, Typescript, Go, Python, Shell, VHDL, Solidity, TLA+, Idris