

# CAMERON PASCAL

## BACKEND SOFTWARE ENGINEER

✉ [cameron@cameron.dev](mailto:cameron@cameron.dev)

🌐 [cameron.dev](http://cameron.dev)

🐙 [github.com/cameron-pascal](https://github.com/cameron-pascal)

in [linkedin.com/in/cameron-pascal](https://linkedin.com/in/cameron-pascal)

## Experience

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### Catchpoint, Systems Inc.

**11/2017 - Present**

Senior Software Engineer

New York, NY

- Design, implement, test, and maintain features for Catchpoint's globally distributed data pipeline and proprietary NoSQL time-series database.
- Primarily work with C#, SQL, and git.
- Occasionally work with Python, React, Javascript, and NodeJS.
- Lead the team's .NET Core/.NET 5 migration effort, including the conversion of WCF services to gRPC.
- Performed the architectural design, cost analysis, and implementation for a CIO-mandated strategic initiative to migrate a 100TB/month global storage system to AWS S3.
- Reduced average query times by 40% by introducing a heuristic to reorder lookup/filtering operations.
- Designed a consistent-hashing scheme to overcome the horizontal scaling constraints of Catchpoint's NoSQL time-series database.
- Delivered a proof of concept to migrate Catchpoint's time-series database's storage engine to ClickHouse.
- Delivered a zero-downtime deployment system for Catchpoint's global fleet of web servers.
- Delivered an automated deployment tool that replaced an error-prone and manual deployment process.
- Developed an IO parallelization strategy that considerably reduced data insert times and hardware requirements.
- Built a custom query language for Catchpoint's NoSQL time-series database.
- Built a bump-allocation based memory allocation strategy to improve garbage-collection times.
- Frequently collaborate with SRE's and technical account managers to solve both infrastructure and client issues.
- Regularly investigate and solve CPU, IO, and memory bottlenecks.

### Infragistics, Inc.

**5/2016 - 11/2017**

Associate Software Developer

Cranbury, NJ

- Worked on a full-stack engineering team that delivered a business-intelligence product called ReportPlus.
- Developed, maintained, and tested features using C#, Angular 4, TypeScript, Webpack, ASP.NET, SQL, and Git.
- Collaborated with PM/UX to deliver a data export feature, involving 10+ Angular screens and numerous API endpoints.
- Prototyped a JSON Web Token (JWT) authentication scheme that eventually was integrated into the product.

### Infragistics, Inc.

**Summers 2013 and 2014, 4/2015 - 5/2016**

Associate Software Developer - Intern

Cranbury, NJ

- Participated in three consecutive internships working in both product development and customer consulting.
- Developed, maintained, and tested features using C# and Java.
- Delivered an Android application that showcased Infragistics' Android components along with source code examples

## Education

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### Rutgers, The State University of New Jersey

B.A. Computer Science

## Extracurricular

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### Zeta Beta Tau Fraternity - Beta Delta Chapter

Treasurer (Executive Board)

- Managed \$300,000 in annual rent collection and a \$50,000 operating budget for the 70+ member organization.

## Honors & Awards

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### Boy Scouts of America

Eagle Scout