Parth Shelgaonkar

Software Developer | Problem Solver

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github.com/parth-shel   in/parth-shel

PROFESSIONAL EXPERIENCE

Bloomberg L.P. - TickerPlant, New York - NY - *Software Engineer*

JULY 2020 - PRESENT
- Worked on **SamayDB** team on a distributed, performant in-memory time-series DB for real-time market data.
- Worked on **TPSync** tool for syncing intraday data of securities. Tool used by the SRE team for replication, redundancy, and disaster recovery.
- 24x7 rotating on-call schedule to support global trading hours as part of SLA.

Engineer.AI, Los Angeles - CA - *Engineering Intern*

MAY 2019 - AUGUST 2019
- Worked on **Solution Builder** project to reduce software development time by generating code based on a catalog of building blocks & integrating with platform-specific run engine framework.
- Designed high-level, **platform-agnostic DSL** (PRPL) and implemented the **assembler engine** backend translators for Swift, Kotlin, Ruby, and TypeScript.

Purdue University, West Lafayette - IN - *Undergraduate Research Assistant*

JULY 2018 - MAY 2019
- Worked on **data center networking architecture** that supports **live VM migration**. **DCnet** project funded by **DARPA**.
- Worked on research in **blockchain-based distributed systems**. Verifying transactions of active bundles (**data dissemination**) for **user data privacy**.

Purdue University, West Lafayette - IN - *Undergraduate Teaching Assistant*

AUGUST 2017 - DECEMBER 2019
- Teaching Assistant for CS 408 (**Software Testing**), CS 354 (**Operating Systems**), CS 252 (**Systems Programming**), CS 251 (**Data Structures and Algorithms**), CS 240 (**C Programming**) & CS 193 (**Freshman Tools & Resources Seminar**).

Findability Sciences, Aurangabad - India - *Data Science Intern*

MAY 2018
- Worked on **Natural Language Processing** (NLP) project for **sentiment analysis** in Indian languages - Hindi and Marathi.

PROGRAMMING SKILLS / TECHNOLOGIES

Proficient - C/C++, Rust, Scala, Java, Python (SciKit, PyTorch, TensorFlow), C# (.NET Core), Shell scripting, ARM/x86 assembly, Git, Linux/UNIX

Familiar - JavaScript (Node/Express), Coq, SQL, Lua, HTML, CSS, Docker, Kubernetes

EDUCATION

Purdue University, West Lafayette - *Bachelors of Science, Computer Science*

FALL 2016 - SPRING 2020

Relevant Coursework - Programming Languages, Reasoning About Programs, Artificial Intelligence, Operating Systems, Security Foundations, Compiling & Programming Systems, Data Communication & Computer Networks, Data Mining & Machine Learning, Database Systems, Operating Systems, Systems Programming, Software Engineering, Competitive Programming, DS & Algorithms, Computer Architecture, Fundamentals of CS, Statistics.

PROJECTS

xpac

JANUARY 2018 - APRIL 2018

- Developed a **cross-platform package manager** for the *nixes.
- Developed the client-end command-line utility and repo server backend in C/C++.
- Designed and implemented the **client-server protocol** for package transmission and metadata schema for **package management** and **dependency trees**.

pshell

AUGUST 2018

- A simple ***NIX shell**, with support for pipes, logical operators, I/O redirection, environment variables, wildcarding, history & tab completion, written in Rust.

prism

MAY 2019 - JULY 2019

- Implemented a **safe, constant-time compiler pass** for LLVM.
- PRISM generated byte code can prevent adversarial **side-channel timing attacks** on cryptographic algorithms.

naïve-bayes

JUNE 2018

- **Bayesian classifier API** and **spam filtering** application, written in C++.
- Designed and implemented project skeleton and supporting modules as a TA for Data Structures & Algorithms course.
- Wrote an editorial solution for the students, explaining a step-by-step implementation of the project.

DRAwing COmpression (DRACO)

DECEMBER 2017 - JANUARY 2017

- DRAwing COmpression library to **compress images**, written in C.
- SCRIBBLE drawings are compressed by carving outlines to map shapes using scan line algorithm.

SCRIBBLE (parthshel.com/scribble)

2015

- Designed **MS Paint** like scribble pad using the Borland Graphics Interface library in Turbo C (DOS).
- Implemented optimized image file format to reduce memory footprint.
- Ported legacy code to X11 for UNIX like systems.

ACTIVITIES

Purdue Linux Users' Group - *Treasurer*

MAY 2018 - MAY 2019

- Organized Vim workshops, Git tech talks, Linux install fests, LAN parties & suicide Linux contests.