Christian Oudard

ChristianOudard@pm.me

github.com/christian-oudard

It turns out that if you really understand something well, you can teach a computer to do it. This has been a source of endless fascination for me throughout my life, from the first time I taught my TI-86 calculator to play chess in highschool.

For me it all starts with getting a precise understanding of what needs to happen. I'm a great communicator and I thrive in collaboration. My code is well organized and easy to read. In a team context, I'm often serving as the translator between the worlds of technology and business, making technical realities clear for strategic planning, and business intentions clear for the technologists.

I've worked in a wide variety of fields, including game development, graphics programming, server administration, databases, web frontend, cryptography, and financial analysis.

Skills

Some of my favorite tools and technologies are:

- Linux

- Git

- Shell Script

- Python (Django, Pandas)

- Rust

- Haskell

- Cloud computing (GCP - Google Cloud Platform, AWS - Amazon Web Services)

- Databases (Postgres, MySQL, MongoDB, SQLite, Redis)

- Web frontend (HTML, CSS, JavaScript)

- LLMs - Large Language Models

Work History

Software Consultant, RHS Financial

November 2017 - Present

4171 24th St. St #101 San Francisco, CA 94114

Contacts: Colby Davis, Risley Sams
Technologies: Python, CVXPY, Postgres, Google Cloud, Pandas, FIX protocol

I have built a sophisticated portfolio optimization and live trading system, with the lead quantitative analyst. The

automation I created reduced his rebalance time per-client from a tedious 2-hour Excel process to a convenient ten minutes. We use convex optimization to automate rebalancing of investments for over 200 clients, and manage their trades on the NYSE via the FIX protocol.

Senior Software Engineer, MobileCoin Inc.

May 2021 - October 2023

275 8th Street San Francisco, CA 94103

Contacts: Sara Drakeley, James Cape
Technologies: Rust, Python, Elliptic Curve Cryptography, gRPC, SQLite, SQLCipher, Intel SGX

As a member of the core blockchain team, I worked with a Rust codebase doing high security cryptographic calculations, with over a billion dollars in wealth depending on it. The most safety critical portions of the code communicate in a decentralized consensus network, via secure enclaves. I specialized in the API interface and encrypted database for cryptocurrency exchanges. All the code I wrote here was open-source, so you can see my contributions here: github.com/mobilecoinofficial/full-service.

Engineer, Bonsai AI

March 2017 - October 2017

2150 Shattuck Ave #1100, Berkeley, CA 94704

Contacts: Tod Frye, Ken Sedgwick, Matthew Haigh
Technologies: Python, Django, Docker, TensorFlow

I was a member of the backend engineering team, building an ML training and inference service. It was based on a domain specific language to make ML programming more accessible. Here I learned a great deal about optimization and reinforcement learning theory, and helped implement new techniques from our research team.

Data Engineer, Disqus

May 2016 - December 2016

301 Howard street suite 300 San Francisco, CA 94105

Contacts: Adam Hitchcock, Phillip Pham, Jason Yan
Technologies: Postgres, SQL, Python, Django, JavaScript, React, AWS, Apache Kafka, Apache Storm, Apache Hive, Amazon Redshift

I worked here on the data team, writing and managing batch database jobs to transform large data sets coming from their 500 million monthly unique users. Our three-person data team was responsible for an analytics pipeline handling tens of millions of events per day. My role was fairly flexible, and I also helped with the Django backend and the React frontend.

Engineer, Infer inc.

July 2015 - September 2015

444 Castro Street, Ste. 109 Mountain View, CA 94041

Contact: Richard Mehlinger
Technologies: Python, Scikit-learn, CoffeeScript

Infer was a company which helped optimize sales pipelines via a Salesforce plugin. We used machine learning to help sales teams prioritize which contacts were most likely to convert into customers. My responsibility here was mainly to write an internal user interface for the data engineers to develop their ML models.

Senior Backend Engineer, TinyCo

September 2012 - January 2014

225 Bush Street, 19th floor San Francisco, CA 94104

Contacts: Karan P Singh, Robert Kotredes
Technologies: Python, Django, Tornado, MySQL

TinyCo creates free-to-play mobile games, focusing on cute characters and time-locked game mechanics. I was working on the backend team. In collaboration with the mobile frontend team, we released several games a year, each one requiring its own backend code and database deployment. Here I coded complete rewrites of several major systems, such as the code deployment system and game configuration server. I also instituted the usage of better practices for unittesting and database migrations.

Engineer, Scribd Inc.

January 2012 - August 2012

539 Bryant St, Suite 200 San Francisco, CA 94107

Contacts: Jennifer Lin, Jared Friedman
Technologies: Ruby on Rails, Javascript, HTML/CSS

Working as a full stack engineer, my responsibilities at Scribd included the Scribd Developer API, internal mobile client API, and the embedded document viewer.

Lead Software Developer, PolicyStat, LLC

October 2008 - January 2012

1311 W. 96th St, Suite 250 Indianapolis, IN 46260

Contacts: Wes Winham, Steve Ehrlich
Technologies: Python, Django, AWS, HTML/CSS, jQuery, Redis, MySQL

I joined PolicyStat at a very early stage, when there was just the CEO, the CTO, and myself. Over my time there, our client base grew from two hospitals to over a hundred. I did a little of everything here, including server administration, Django backend, a responsive web frontend, and some help with pitch decks. Notably, I developed an algorithm for diffing structured documents in HTML, which you can see here: https://github.com/christian-oudard/htmltreediff

Web Developer, BluegrassNet Development

May 2008 - October 2008

321 E Breckinridge St Louisville, KY 40203

Technologies: PHP

My first job out of college, it was a small custom web development shop in PHP. We were making a trucking logistics platform for Tennessee Steel Haulers.

Software Engineering Intern, Flight Data Simulator Project

March 2008 - May 2008

Speed School Computer Science Department, University of Louisville

Contact: Ming Ouyang
Technologies: Python, PyOpenGL

This internship involved writing 3D renderings of flight landing approach paths.

Software Engineering Intern, CMTS Project

October 2006 - March 2008

Speed School Mechanical Engineering Department, University of Louisville

Technologies: C#, DirectX

This project, the "Concept Modeling Tool Suite", was a collaboration with the U.S. Army. It was aimed at designign soldier transport vehicles with reduced noise, vibration, and harshness characteristics. I wrote the 3D user interface to the vehicle modeling program we developed. The output was a vibration analysis produced by finite element modeling. Read all about the project in the dissertation of one of our researchers: https://ir.library.louisville.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1816&context=etd

Software Engineering Intern, Alcoa Louisville Foil Plant

August 2005 - August 2006

Technologies: ASP.net, Microsoft Access

My work at the aluminum foil plant was to create data reporting pages for internal usage. I created an up-to-the-minute reporting system showing the readings from the foil mills, which roll sheet aluminum down to the thickness of kitchen foil.

Education

Bachelor of Computer Science

Fall 2004 - Spring 2008

University of Louisville, Speed School of Engineering