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## Contractor, 2019-Present

- **Google:** security engineering under NDA with Java and Go for internal tooling to ensure policy integrity during employee onboarding.
- **Meta/Facebook:** observability infrastructure engineering to support significantly expanded logging requirements, using Hack/PHP and Hive.
- **Chick-fil-A:** managed over 3,000 individual Kubernetes clusters across national restaurant footprint to support IoT infrastructure. Reduced issue escalations by 60% through implementing self-healing mechanisms in Go, enhanced edge monitoring with AWS TimeStream, and upgraded support tooling.
- **Dolphai:** Built automated appointment booking voicebot utilizing OpenAI real-time streaming API.
- **Seshet:** Used Ruby and Go to build a tree of citations across an arbitrarily large set of documents for analysis.

## Zettaset Inc, 2013-2019

- Integrated XCrypt service with BOSH Director and agent to encrypt data services automatically on instantiation to support a zero-trust environment.
- Adapted Ansible-based installer to run without root privileges.
- Lead Hadoop Isilon project, adding support for extended attributes to Isilon HDFS to expand market for Zettaset's granular high-performance encryption products.
- Designed and implemented async policy servers using Java and C++.

## Avocent, 2008-2013

- Developed object-oriented C++ CLI for managing Avocent ACS, localizing it for global markets by adding support for languages represented in UTF-16.
- Architected and built API library for power management, using shared memory for interprocess communication, improving performance by up to 10x.
- Created license server for license verification for Virtual ACS.

Avocent Corp., Senior Software Engineer, Fremont, CA 06/2008 – 01/2013

Oxford & Associates, Consultant, Avocent Inc., Fremont, CA 02/2008 – 05/2008

Armada Group, Consultant, Cisco, San Jose, CA 03/2006 - 06/2007

Littera Inc., Software Engineer, Los Altos, CA 01/2006 - 03/2006

InfoPlus Intl, Consultant, Cisco, San Jose, CA 04/2002 - 02/2006

Littera Inc., Software Engineer, Los Altos, CA 03/2001 - 03/2002

MySimon, Senior Software Engineer, San Jose, CA 10/2000 - 02/2001

eCircles.com, Senior Software Engineer, San Mateo, CA 10/1998 - 08/2000

GolfWeb, Senior Software Engineer, Cupertino, CA 04/1997 - 09/1998

Oracle Corporation, Government Services, Principal Consultant, San Mateo, CA 05/1995 - 04/1997

Imaging Concepts, Inc., Senior Software Engineer, Mountain View, CA 10/1991 - 05/1995

Mecon Associates, Senior System Analyst, Union City, CA 03/1989 - 10/1991  
OCR Systems, Inc, Programmer/Analyst, Philadelphia, PA 03/1988 - 03/1989  
Computer Center of the Institute of Economic Problems of Academy of Science of the USSR, Leningrad, USSR. Senior System Analyst. 3/1982 - 8/1987  
Leningrad Special Design Office of Technology, Leningrad, USSR. Programmer. 7/1980 - 3/1982

## **SKILLS HIGHLIGHTS:**

### **Specialty Skills:**

C/C++, Java, Docker, Go, Python, Ruby, Perl, XML, Interprocess communication(BSD Sockets), imaging, application migration, Graphical User Interfaces/GUI Tools

### **Protocols:**

TCP/IP,

### **Life Cycle Expertise:**

UML, Logical Database Design, Physical Database Design, Application Development, Testing, Capacity Planning, Data Conversion, Database Administration, Database/Application Performance Tuning

### **Operating Systems:**

Linux, UNIX(HPUX, DGUX, AIX, Solaris,).

### **Big Data:**

Hadoop, Hbase, Hive

### **Other Products:**

RDBMS, SQL Server, HTML.

## **PROJECT EXPERIENCE:**

### **01/2025 – Present**

#### **Dolphai Technologies: Intelligent virtual assistant platform**

##### ***Environment: Python, Postgres, GCP***

- Designed and implemented an automated appointment booking chatbot for Google Calendar via SMS and WhatsApp as well as for Wix and GoHighLevel calendars.
- Designed and implemented an automated appointment booking voicebot for Google Calendar as well as for Wix and GoHighLevel calendars utilizing OpenAI Real-Time Stream API and ElevenLabs Streaming API
- Designed and implemented an automated contact management for GoHighLevel CRM.
- Built and optimized Docker images for AI-based chatbot and voicebot applications, enabling scalable and portable deployment across environments.
- Created a custom Docker image for ngrok with automated tunneling configuration, integrating it into Kubernetes for dynamic service exposure and testing.

**01/2024 – 12/2024**

**Seshet Technologies: AI service company**

*Environment: Go, Ruby*

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**04/2022 – 12/2024**

**Chick-Fil-A: ERC(Enterprise Restaurant Compute) Platform, through InsightGlobal.**

*Environment: Go, Kubernetes, C/C++, AWS,*

- Part of development team in supporting and maintaining the IoT infrastructure across all restaurants consisting of 3000 individual kubernetes clusters. Responsible for development of Support tooling including Monitoring, Self-healing remediation, and more powerful Support Portal Application.
- Extended ERC C SDK with permanent network configuration retrieval and application.
- Created cron job that scans all locations, identifies recoverable nodes and initiates recover action.
- Improved locations report performance by moving filtering from the client to the server side.
- Improved performance of queries to AWS TimeStream DB by adding where clause with timestamp range condition to avoid full scan.
- Production Support including enhancing edge monitoring and issue root cause analysis reducing issue escalations by 60%

**11/2022 – 10/2023**

**Google, through Magnit LLC.**

*Environment: Java, Go, Linux, Google environment.*

- Code design and implementation in various infrastructure security projects.

**04/2022 – 08/2022**

**Meta, through Tripple Crown LLC.**

*Environment: Hack, Hive.*

- Implementation of various logging filters(Hack) and logging verification(Hive).

**01/2020 - 12/2021**

**Google, through Judge Group.**

*Environment: C/C++, Java, Go, Linux, Google environment.*

- Code design and implementation in various infrastructure security projects.

**01/2013 – 08/2019**

**Zettaset Inc.**

*Environment: C/C++, Java, Go, Bash, Python, OpenSSL, Linux, OneFS RestAPI, Hadoop, Docker, Kubernetes, Ansible, Git*

- Participated in BOSH project – Integration of Zettaset XCrypt Service Encryption with BOSH Director and BOSH agent to encrypt data service instances automatically as they are deployed, so the data is always protected.

Eliminated necessity for admin to manually distribute CA Certificate during the deployment for

following usage in https client/server connections by extending estserver/estclient(Cisco open

source) functionality. Added establishing not secure client/server socket connection, encrypting

CA cert on the server side, sending encrypted cert to client, decryption and saving on client side, necessary to establish future https connection.

- Participated in Docker/Kubernetes project. Container volumes encryption through docker volume driver(docker plugin).  
Automated Docker images creation for Zettaset subservices.(bash scripts)  
Implemented Java jinja2 processor from ansible hosts.inv input. (Modification of open source).  
Created Skytap Kubernetes template for future development.

- Led securing Zettaset full disk product installation per customer request.  
Initial Zettaset installer was implemented to run as root.  
Converted ansible installer scripts to allow non-root installion. (ansible)  
Converted ansible installer scripts to shell based postinst rpm scripts.(bash scripts)
- Participated in development of XCrypt Hadoop and XCrypt Object products, which provided granular high-performance encryption and data integrity protection for HDFS file system and object data stores.  
Improved Zettaset proprietary Policy Server which allowed per directory/file/object encryption.  
Designed and implemented of non-blocking java server (Reflection and JNI). (Java, C++)  
Designed and implemented several Policy Server request handlers for S3. (Java)  
Debugged and fixed Rest and Proxy servers for S3. (Java)  
Debugged and fixed various problems. (Java, bash scripts)  
Implemented compartmentalization of independent layers of Policy Server through generics. (Java) This allowed to use already developed layers in other servers with significant savings in time and money.
- Lead Hadoop Isilon project.  
Customer – Inovalon Corp expressed interest in direcory/file based encyption of Hadoop cluster based on Isilon HDFS implementation. Isilon hdfs implementation is not complete, in particular extended attributes(Xattr) API is not implemented.  
Zettaset encryption solution uses Xattrrs.  
Added extended attributes to Isilon hdfs implementation through OneFS RestAPI utilization. OneFS RestAPI. (Java)

Customer also desired to use Isilon as HDFS and NFS file server which are incompatible due to difference in HDFS and Linux ownership inheritance model.

Enabled encryption/decryption inside Hadoop NFS Gateway – extended not implemented by Isilon hdfs functionality through OneFS RestAPI utilization. (Java)

- Participated in automation of secure Hadoop installation project.  
Secure installation(kerberization) was not available at the time from Cloudera, HDP and etc. Was required by customers seeking to provide high degree of security access to sensitive data (Healthcare).  
Automated, as part of the team, secure Hadoop installation. (bash scripts, Python)  
Patched Hbase(/etc/hosts and DNS name resolution). Hbase code supports only DNS. (Java)  
Automated secure Hadoop configuration based on EMC Isilon storage platform. (bash scripts)  
Secured(kerberized) hdfs communication with Isilon OneFS. (bash scripts)

**06/2008 – 01/2013.**

**Avocent Corp.**

**02/2008 – 05/2008.**

**Oxford & Associates, Contract at Avocent Corp.**

***Environment: C/C++, Java, Bash, Linux, Cross-compiler***

Avocent ACS(Advanced console server) improvement and customization project.

ACS is Linux running appliance – PowerPC and 256M. Thousands are installed in data centers all over the world. Admins created scripts using ACS CLI to configure and reconfigure not network connected machines saving time and considerable provisioning costs.

Developed OO (C++) version of CLI (command line client) application to manage Avocent

ACS. Improved performance and added functionality.

CLI was designed to be XML interpreter. It receives xml text containing description of commands and data, converts them to DOM libxml model, builds series of Objects on

top of

DOM model and executes entered from command line commands.

Implemented localization of CLI and UIC process for multi-byte languages, in particular for Japanese market.

UIC process feeds CLI with xml and implemented in C.

Implemented Barricade requested improvements in CLI.

Power management performance improvement project.

Designed and implemented API library to power management process. API functions are used to obtain information from, as well as submit management commands, to attached power devices. Shared memory is used for interprocess communication. Development goal was to improve performance of current applications. Measurements showed up to 10 times improvement.

Also used to implement functionality on legacy platforms (Older PowerPC and 128M).

Virtual ACS project(Software implementation of ACS).

Designed and implemented license server and license verification for Virtual ACS.  
Participated in creation of Sysco, EMC proposal.

Dell 12G project.

Performed several C++ tasks.

#### **04/2002 – 06/2007**

**Armada Group, Contract at CISCO, EMAN group.**

**InfoPlus Intl., Contract at CISCO, EMAN group.**

*EMAN – Enterprise Management group -. managing the CISCO enterprise information infrastructure.*

***Environment: Perl 5.6, Linux, Sun Solaris 10, Oracle 9.***

Developed several application services provided by Information Systems to Cisco employees.

- Developed Calling Card, VPN, Mobile, Mobile Mail applications based on EMAN OO Framework.

All applications implemented Cisco business process of requesting, approving, ordering and provisioning services provided by Cisco to employees.

- Extended and maintained Circuits Management Application.
- Developed, modified and maintained several EMAN Telecom Billing Database applications.
- Designed and implemented DB tables as well as modified existing schema to support above mentioned applications.

#### **01/2006 -- 06/2006**

#### **03/2001 – 03/2002**

**Littera Inc., Applications.**

***Environment: C++, Perl 5.6, Linux, MySQL.***

#### **01/2006 – 06/2006**

Created proxy multi-plexor process utilizing IPC (BSD Sockets) to improve overall system scalability and simplify client side API.

Improved processing (merger) of big lists utilizing memory file mapping.

#### **03/2001 – 03/2002**

Developed several applications utilizing Littera proprietary Data Feed Management engine.

#### **10/2000 – 02/2001**

**mySimon, Inc., International Project.**

*MySimon, Inc. is a free comparison shopping service that helps people decide what to buy and*

*where to buy it..*

***Environment: Java, Windows NT, Sun Solaris 8, Oracle 8, SQL Server v6.5 and v7, Transact-SQL.***

Designed and implemented middleware multithreaded multiplexor process.

Responsibilities: Development (using Java, Transact-SQL).

- Installed all the components of the site(Servers) on separate sets of machines and re-configured servers to work in the new environment.
- Generalization for Internationalization:

Wrote Java code to dynamically change configuration parameters of the servers.

Modified code so that search results and queries made to the search engine could be stored in the appropriate directories. This would enable the servers to point to the correct directory even though the path of the directory changed dynamically based on the country.

- Co-branding:

Re-organized partner sites to conform to our template system. This was done so that partners could use the functionality that we provide and keep their GUI.

**10/1998 – 8/2000**

**eCircles.com, eCicles service MiddleWare Project.**

*eCicles.com is a free service that gives small groups a central, private place on the Internet to*

*communicate, organize and share. One can share a photo, plan an event, share music, start a*

*discussion, receive news or one can get all of these features by creating a private place for ones*

*group.*

***Environment: FreeBSD 3.3, GNU C++, Sybase v12, Transact-SQL.***

Responsibilities: Development (using C++, Transact-SQL).

Designed and implemented middleware multithreaded multiplexor process. Process functions as a server for UNIX domain socket connections and client to Internet domain socket connections. The purpose of the process is to route requests from the Perl functions working within Apache web servers to command manager connected to database or any other repository and to route responses back to correspondent requesters. Process provides improved scalability through request bufferization.

Implemented and modified several stored procedures enabling new application capabilities.

## **EDUCATION:**

Masters Degree , Applied Mathematics and Computer Science, Saint-Petersburg Polytechnical University, Saint-Petersburg, USSR.

Vytag Advantage, Inc.: Advanced course in application development for IBM AS/400

Technological University: Advanced Programming Cause at Training Center

Oracle Corporation:

Object Oriented Programming in C++  
Enterprise Manager

Oracle Mobile Agents  
SQL\*NET/DCE

**PERSONAL: US citizen.**