

## Contact

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## Top Skills

Program Management  
Networking  
Cloud Computing

## Certifications

The Complete Flutter and Firebase  
Developer Course  
Ansible Essentials  
Python for Financial Analysis and  
Algorithmic Trading  
Penetration Testing: Advanced Kali  
Linux  
TensorFlow for Deep Learning with  
Python

## Patents

Systems and methods for  
multiple mode voice and data  
communications using intelligently  
bridged TDM and packet buses and  
methods for performing telephony  
and data functions using the same

# Chris Trees

Edge Systems Engineer and Management Proficient  
Cedar Falls

## Summary

Professional Goal:

Increase productivity through the application of process automation.  
Intuition and inspiration through the path of perspiration.

Deep interest in deployment and maintenance of advanced system  
topologies. I gain extreme satisfaction in delivering maintainable  
systems through the application of operational knowledge into  
competitive environments.

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## Experience

### CAT9, LLC

What is next Research

April 2018 - Present (3 years)

In a Place, out in Space

Researching AI learning feedback methods. Researching deployment  
for Blender grid rendering using Bare Metal infrastructure. Researching  
SDN, SDS and CI/CD methods for Bare Metal infrastructure. Researching  
automated infrastructure deployment and USDA broadband efforts for small  
rural communities. Researching building Blockchain foundations for Edge  
Communities. Researching who I should work with next.

### Mail Services, LLC

Research Developer

August 2012 - April 2018 (5 years 9 months)

Researched NFC production process to leverage USPS commercialization  
incentives. Evaluated and integrated AGILE, CI/CD, QA testing and system  
virtualization. Researched storage migration solutions. Evaluated production  
site maintenance processes. The site was PHP based with access to restricted  
storage, networks, and SQL backend database.

### OvalPath

Sr. Software Engineer

April 2011 - August 2012 (1 year 5 months)

San Jose, CA 95112 and Cedar Fall, IA 50613

Social Mobile communications platform serving the commercial nuclear power market. Developed HTML5 map annotation for mobile field devices. Established QA Test Automation and build documentation. Worked as Sales Engineer with CEO to adopt the platform to specific needs of new customers. Acquired by CurtissWright: <http://www.marketwired.com/press-release/curtiss-wright-flow-control-acquires-ovalpath-nyse-cw-1837177.htm>

## CAT Services / Croft Utility Partners

Consultant / Founder

March 2009 - April 2011 (2 years 2 months)

Croft Utility Partners ( <http://croftutilitypartners.com/> ) leverages and extends unique infrastructure and usage patterns of each community to reduce reliance on external commodities, encourage development of localized resources and facilitate sales of excess capacity within the network. The Croft concept was born out of the desire to serve technology to small rural communities in a locally relevant, economically maintainable and socially acceptable way. These efforts lead us to integration of power, water, sewer and emergency communications systems.

## Grasshorse LLC

Technology / Grant Consultant

June 2008 - February 2009 (9 months)

Embedded systems, software automation, and process management. Managed creative artist team through a software production process. Helped with a State Grant to commercialize the "Proto-Motion" mixed media stop motion animation automation process. This project used multiple new technologies creatively applied to the movie industry with experimental state funding. This project opened my eyes to the benefits and huge risks of social-political funding, the creative mindset in an operational process and mixing multiple merging technologies. Established computer industry development practices into the animation studio production process.

## Vianeta Communications

Consultant

March 2005 - August 2006 (1 year 6 months)

Platform provider for medical transcription technology and services. Developed tools and training materials for data center installation and testing. Acquired by Spheris <https://www.bizjournals.com/sanjose/stories/2005/12/19/daily13.html>.

## Pantera Systems

Founder and Architect

January 2002 - December 2002 (1 year)

Based on extending the idea of distributed grid computing, Pantera attempted to build a distributed storage and compute engine for accelerated batch processing. The grid matrix was used to distribute both storage, data base and compute algorithms across traditional servers. Matrix reduce was then used along with the storage index to keep working data within the various cache systems increasing the overall processing speed.

## Fusion One

Sales Engineer

March 2001 - November 2001 (9 months)

San Jose, CA

Integration of Levient redundant high availability server infrastructure stack into multiple data centers for specific customer requirements. Multiple telecom and mobile cellular phone technology integrations. Developed scripted installation and network monitoring tools specific to customer data center requirements. Acquired Fusion One technologies.

## Monggo

Systems Design

January 2000 - March 2001 (1 year 3 months)

Monggo (changed name to Levient) developed one of the first remote desktop systems using WAP enabled devices (cell phones) as the terminal access point. Developed a redundant high availability server infrastructure stack deployed into multiple data centers. Developed automation for UI testing. Developed automation for network health monitoring. Integrated network monitoring into vendor Network Operations Centers (NOC).

## Vertical Networks

Sr. Systems Engineer

February 1997 - February 2000 (3 years 1 month)

Consultant and first Hardware Engineering hired by Vertical Networks. Drove hardware and mechanical design for the integrated LAN and Telephony product called Instant Office. Also aided in the recruitment of early stage engineering talent.

## Rapid City Communications

CAT Services

April 1996 - February 1997 (11 months)

Another great group of people! Got to help them build another high-speed-density backplane. Worked with some great S/W guys that really pushed into simulations that worked with the H/W Dev guys... Wish I could have helped them slam out some ASIC's, but had too many people asking for my time and had to multi-plex.

### SkyStream

CAT Services

July 1996 - October 1996 (4 months)

FPGA design tool assistance.

### Sun Microsystems

CAT Services

October 1995 - July 1996 (10 months)

Netra group consultant for hardware. One of the better jobs I've ever had! Developed embedded user control console for Netra server line. Invented a serial multiplexing system for the serial attached embedded control console. Integrated controller firmware and SUN OS device drivers. Designed multiple PCB assemblies. Assisted in mechanical design, compliance testing, vendor manufacturing testing and quality control.

### General Magic, Inc.

CAT Services

September 1994 - July 1995 (11 months)

Great people to work with and I meet many people who've become part of my lifelong tribe. If only they would have built the mock-up that AndyH carried in his pocket... or what AndyH put on the TV. I worked mainly keeping the partner development systems running. I did the mechanical and umbilical demo system for what I think was the first touch based magic cell phone prototype. BTW that is STILL my personal phone, I would LOVE to get it back (if anyone knows where it is)... [https://en.wikipedia.org/wiki/General\\_Magic](https://en.wikipedia.org/wiki/General_Magic)

### Hughes

CAT Services

January 1991 - August 1993 (2 years 8 months)

Designed one of the first ATM networking boxes in the industry. Very fun project, got to make things that go FAST!!! All the cross bar switching, cache management and learning the balance between H/W, F/W and S/W really

helped me gain a sense of balance with various design domain issues. [https://en.wikipedia.org/wiki/Sytek\\_Inc](https://en.wikipedia.org/wiki/Sytek_Inc)

## IKOS

### Sales Engineer

July 1990 - October 1990 (4 months)

Field sales engineer working on ASIC simulation integrations. Worked on simulation models for multiple silicon vendor libraries. Also helped various ASIC designers debug future and current silicon production issues. Worked with OAK Technology on multiple ASIC design simulations. [https://en.wikipedia.org/wiki/Oak\\_Technology](https://en.wikipedia.org/wiki/Oak_Technology)

## The Engineering Dept. Inc. (TED)

### Engineer / Member of Board

July 1986 - September 1989 (3 years 3 months)

Great idea. Still ahead of it's time. Outsource your engineering. Reworked development system via wire-wrap boards for "Little Blue". Little Blue (became PC Transporter) was a co-processor board for the Apple II that allowed the user to run IBM PC native software and use Apple II devices as native IBM devices. Many ideas were ahead of the times, such as clone BIOS, virtualization, distributed callbacks and storage normalization. The fun part was getting to know a LOT of ex-Apple early engineers.

## Lockheed Martin

### Engineer

June 1985 - August 1986 (1 year 3 months)

First person to introduce PLA and FPGA's to QA test fixture design. Designed and build first meta script process to covert vendor data sheets into a functional timing simulation model. P387 - JohnK and I took a after-thought project from 1 year behind to 6 months ahead of schedule!

## Natural Gas Pipeline Company of America (NGPL)

### Summer Intern

May 1983 - August 1984 (1 year 4 months)

Columbus Junction, IA and Beatrice, NE

Summer of 1983 - Reviewed maintenance procedures for multiple Compression Stations. Create draft of maintenance request for compressor engine manifold replacement. Investigated and submitted RFQ that saved NGPL \$50K per station on manifold replacement procedure. Observed and assisted multiple mainline replacement construction and cleaning projects.

Summer of 1984 - Responsible for cathodic survey of 800 miles of NGPL Pipeline in Kansas, Nebraska and Iowa. Drafted and submitted "Induced currents in gas pipelines due to common power line right away."

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## Education

Iowa State University

BS, Electrical Engineering · (1980 - 1985)