Perette Barella

perette@barella.org
585-317-3013
176 Middlesex Road
Rochester, NY 14610

Relevant skills

Familiarity with *{whatever}* is the wrong question; the tech word changes too fast. I continually integrate new technologies and techniques into my repertoire. Growth and adaptability are what I bring with me: there is little I have not accomplished if I've set my mind to it.

My approach is methodical and I can be slower than others because I like to understand what I'm working on. My caution pays off—a prior boss observed that what I work on "stays fixed." To that end, I don't like multitasking or "quick fixes;" the former is a catalyst and the latter the source of bugs.

Desired Environment

I am currently working at UPS, and I'm doubtful I want to return to the insanity of the tech world, but inquire if you like.

Objective: An interesting, stimulating job in a sane environment.

Workload: Average 28–32 hours/week. Amenable to variable schedules, including furloughing or unpaid time off during slow times. Occasional extended time off required to avoid burn-out.

See also

My projects: http://deviousfish.com
> The pianod2 source code and some scripts are available for download and review. I also suggest the essays *Coding Reflections* and *Stages of Programmer Skill.*

My web site: perette.barella.org

My house's music server:
> http://house.perette.barella.org:4446
> telnet: house.perette.barella.org:4445

Portfolio

pianod2 (2013–present)   C, C++11, Objective C++

A music player with multiple sources and output zones for home automation or multi-listener scenarios. It is cross-platform, running on macOS, Linux, ddwrt and others. It is open-source, available at **DeviousFish.com**.

> *Communications:* TCP/IP sockets, HTTP, WebSockets, TLS
>   *Libraries:* OpenSSL, GnuTLS, mbedTLS, SecureTransport, LibreSSL
> *Audio/media:* Metadata extraction, stream decoding, audio output
>   Libraries: TagLib, gstreamer, FFmpeg, AVFoundation, libao, SDL (libsdl)
> *User interface:* TypeScript (JavaScript), Jquery, HTML5, CSS, "responsive design"
> *Build system:* Gnu Autotools (Autoconf & Automake), m4, shell

DCloud (2018–present)   Python 3, Korn shell, HTML, CSS, m4

A wrapper for Subversion or Mercurial repositories, creating a simple cloud solution. Practical commands provide quick command-line access to data; post-commit hooks publish cloud contents to a web site to provide read-only web access. Open-source, available on **DeviousFish.com**

Other Open-Source Contributions   Python, C

> Python ICS (calendaring) library: Added support for CATEGORIES field (2018).
> Korn shell: fix cursor position algorithm in prompt display, addressing quirky behaviors when using the command editor (2018).
> Ffmpeg/libavformat: Added options to set TCP/IP send/receive buffer sizes (2016).
> Mserv: ID3 reader fixes/enhancements, filter fixes/enhancements (2005).

Henehan Law (2017–present)   HTML, CSS, m4

Static web site with content provided by client. Features responsive design for traditional and small screens, as well as print form (like all my sites since 2007ish). Web site: **HenehanLaw.com**

George Druziako Heating (2010–present)   HTML, CSS, m4

Simple business web site developed from discussions with client, printed literature provided by client, and research on HVAC systems. Web site: **GeorgeDruziakoHeating.com**

Tech Work Experience

Software Consultant for Patent Litigation   C++

Woods Oviatt Gilman LLP, Rochester NY   March-April 2014

Five-week contract reviewing defendant's software on behalf of plaintiff, searching for instances of patent infringement. Produced report identifying infringement scenarios, cross referenced with file/line of related code.

E-commerce Web Development   ASP.NET/C#, PowerShell

Web Developer—UniteU Tech, Pittsford, NY   October 2011–June 2013

Web development, adapting template web site look/feel to customer design requirements using CSS. Debugged, implemented new features to template or customized web sites using ASP.NET/C#. Responsible for maintaining and operating PowerShell script used to distribute updates to templated web sites.

Web Site & Software Development   **Variety of technologies**

Freelance work, Rochester, NY.   January 2004–March 2011

Constructed and maintained web sites (HTML/CSS); developed home automation software (C++) and interfaced with BlueTooth proximity detection software (Objective C) and music players; made enhances to music players Mserv (C), PandoraBoy (Objective C); developed spreadsheet for Medicaid gifting plans calculations (Numbers, Excel, OpenOffice); developed databases (FileMaker Pro); maintained IT infrastructure (switches, DHCP, DNS, on-site and remote backup systems, etc.).

Kernel Module and Device Driver Development   **C, ksh, Solaris**

Software Engineer—Heidelberg Digital, LLC, Gates, NY.   October 2000–October 2003

Maintained and enhanced ethernet drivers, license manager, touch screen drivers, operating system installation software, and Berkeley LPD (RFC 1179) & Appletalk PAP STREAMS modules. Performed 32-bit to 64-bit conversion on drivers and STREAMS modules.

SGML/XML Formatter Enhancement   **C, SQL, XML**

Software Engineer—West Group, Rochester, NY   June 2000–September 2000

Enhanced formatting options for software which generated XML files from an Oracle database.

NASDAQ Trading Software Development   **C, X Windows, UNIX**

Software Engineer—Automated Securities Clearance, Rochester, NY   January 2000–June 2000

Implemented compliance with changing Securities and Exchange Commission (SEC) SOES requirements, improved protocol handlers, and added features.

System Administration, Telephony and Microscopy Development   **C++, MFC**

Software Engineer—Sam Asher Computing, Rochester, NY   March 1996–December 1999

Assigned to internal projects, client projects, and was outsourced to Triptar Lens Company (6 months) and Nortel Networks (3 years). Highlights included DNS and Sendmail maintenance; developing CGI web pages, a confocal microscope, directory assistance systems and associated unit tests.

System Administrator   **Solaris, Korn Shell**

EDS for Xerox, Rochester, NY   March 1995–February 1996

Xerox internal sales support: maintained DNS, Sendmail, backup scripts, upgrades (both hardware & software). On-call duties in case of network outages or server issues.

Programmer (Co-op/Paid Internship)   **Turbo Pascal**

Quadracolor Express, Rochester, NY   September 1993–February 1994

Developed job tracking and quoting software for a printing company, reusing refactored database code from Shareware Systems, which was owned by some of the same entrepreneurs.

Programmer (Co-op/Paid Internship)   **Turbo Pascal**

Shareware Systems, Rochester, NY   March 1993-May 1993

Converted an existing DOS inventory application to Windows, and refactored code to eliminate redundancy and improve performance.

Non-Tech Work Experience

Driver & Package Handler
Logistics/ Transportation

United Parcel Service, Rochester NY
December 2017, July 2018–present

Initially, a seasonal worker delivering parcels via personal vehicle. Applied organization, geography, packing, routing and driving skills to efficiently (but safely) deliver parcels to final destinations despite wintry conditions. Later reemployed as a package handler, loading and unloading trucks, sorting packages, processing delivery exceptions, acceptance auditing dangerous goods (hazmat), washing and parking package cars.

> *On a personal note, the way I was treated at my first UPS gig convinced me there is something rotten in the software industry. Despite being a seasonal employee, co-workers and supervisors alike showed appreciation of my effort, and even seemed to care about my well-being. I felt a humanity rarely seen in tech; they recognized the work was hard, where as in software, companies demand ever-more output, yet rarely appreciate the effort it takes to do it well. Tech takes all we can give while employers ignore exhaustion and pain, until eventually we break. UPS awoke me to the possibility of better treatment.*

Receptionist—Law Office
Microsoft Office, Word Perfect

Receptionist (part-time)—Reynolds and Henehan, Avon, NY
April 2007–October 2007

Answered and directed calls, took messages, greeted clients, typed and filed documents.

Inventory Auditing
Retail Services

Auditor (part-time)—RGIS Inventory, Rochester, NY
March 2008–September 2009

Accurately counted and reported inventories for assorted companies.

Early Jobs
Sales, Cashiering, and Dishwashing

Others jobs I have done include working in the dining hall at RIT (summer 1993), cashiering at a supermarket (summer 1990, reemployed spring/summer 1991), and working as a sale associate at Radio Shack (after school 1986-1988, reemployed summer 1989).

Filmography

Are You Sure?
Director, Lighting & Video Editor

Awards: Official Selection, Reel Out Charlotte (2023) Film Festival, Charlotte, NC.

Education

Bachelor of Science in Computer Science
1988–1994

Rochester Institute of Technology—Rochester, NY
GPA: 3.06 of 4.00 overall; 3.29 of 4.00 in major.

Bachelors of Science in Computer Science with concentration in systems software achieved May, 1994.
Minor: Electrical Engineering Technology

Electronics
1984–1988

Oliver Wolcott Vocational Technical High School—Torrington, CT
GPA: 93.40 of 100.

Diploma with concentration in electronics was achieved in June, 1988.

Java, Anatomy, Physiology, Microbiology
2005–2006

Monroe Community College—Rochester, NY
GPA: 3.85 of 4.00.

Assorted coursework in software development, biology, and massage therapy.

Open Source Contributions

Python ICS (Internet Calendaring) Categories Support (2018)   **Python**

Added support for the CATEGORIES field, which was missing from the implementation.

Korn shell fixes (2018)   **C**

I provided various fixes to the Korn shell:

- Correct cursor position algorithm in prompt display code to account for additional escape sequences. This addressed quirky behaviors when using the command editor.
- Correct and enhance parameter expansion with case-modification, which was previously buggy and limited. The new behavior brings it into closer compatibility with bash.

FFmpeg TCP/IP buffering options (2016)   **C**

Added options to libavformat's tcp module to specify send and receive buffer sizes.

Mserv filter enhancements (late 2005)   **C**

This replacement for mserv's search filter pre-parsed criteria into an expression tree, which was subsequently used to evaluate tracks. It operated faster than the original mechanism, was backward compatible, provided a few new features, and was cleaner code.

Mserv ID3 tag reader enhancements (early 2005)   **C**

This enhancement targeted mp3 ID3 tag reading to reduce dropped tracks, fix missing metadata, and correct track durations. This significantly improved mserv's importing abilities and accuracy.

sh-utils printf: Numbered argument support (2002)   **C**

For Gnu's command-line printf, added numbered argument support, allowing values to be substituted in an order differing from the order in which values are provided. The supporting additions to the format string mirror the feature's implementation in the C language.

Community Involvement

Rochester Kink Society, Ltd. (2003–2015)   **HTML, CSS, m4, JavaScript, m4, Filemaker Pro**

Redesigned web site (2008–2012) using HTML 4.01 (later HTML5), bringing accessibility, responsive design, improved navigation. Extensively updated content and automated calendar updates from Google Calendar via RFC 2445. Implemented on-line member dues payment system.

Created a database & point-of-sale system to manage the annual fundraiser auction. It creates a web site, forms and a slideshow. It was in use through 2017.

Served on Board of Directors (2004, 2007-2008), and as an Incorporator (2007), Trustee (2009–2013), Publications coordinator (2008-2012), Facilities coordinator (2007–2008).

Mad River TV-13 (1990-1992)   **Videography**

Volunteer at the local cable-access channel. Produced a skit-comedy show, some local event documentaries, and typeset text announcements on the community video bulletin board. If curious, see: *Burglary Bonanza*, *Frendz*, and *Fast Food's Biggest Mistakes*.