

# Grant Crownfield, Software Developer/Analyst

## Veritas Economic Consulting, LLC

1851 Evans Road, Cary, NC 27513

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### PRACTICE AREAS

- Compliance Evaluation
- Natural Resource Economics

### EXPERTISE

- Computer Model Design and Development
- Applications Development
- System Architecture

### EDUCATION

B.S., Computer Science,  
North Carolina State  
University, Raleigh, NC,  
1995

A.A.S., Computer  
Engineering Technology,  
Wake Technical  
Community College,  
Raleigh, NC, 1991

### SKILLS

#### Programming Languages

- Analytica
- Visual Basic
- VB Script
- SQL
- C

#### Database Technologies

- SQL Server
- Oracle 7.3.4
- MS Access
- SQL Anywhere
- ODBC

#### Web Technologies

- IIS
- MS FrontPage
- ASP
- HTML
- MTS

#### Operating Systems

- Windows 95, 98, ME;  
Windows NT, 2000, XP,  
Vista; Unix; Linux; VMS

Mr. Crownfield specializes in designing and developing custom computer models using Analytica visual modeling software. His design and development work using Analytica includes electricity pricing, electricity reliability, compliance cost, and commercial and recreational fishing models.

Mr. Crownfield also has designed and developed custom software for scheduling, process tracking, a manufacturing process, invoice tracking, billing, other financial systems, and user interfaces with graphics.

### KEY PROJECTS

Design and development of Analytica model for Estimation and Comparison of the Benefits and Costs of Alternative Impingement and Entrainment (IM&E) Reduction Options: Salem Harbor Generating Station.

Design and development of Analytica models for national analysis of the economic and reliability impacts associated with a required closed-cycle cooling retrofit of existing once-through cooling systems (Electric Power Research Institute).

Design and development of Analytica models for Economic Evaluation of Commercial and Recreational Fishery Impacts Associated with Current and Future Power Plant Operations in several states.

Software validation for a telephone data collection system for an ongoing pharmaceutical clinical trial.

Design and development of a system to maintain data for an ongoing pharmaceutical clinical trial.

Design, implementation, and testing of product designs for an embedded leak-detection system (UL approved).

Design, development, integration, and training for custom software systems using Visual Basic. Software included scheduling, invoice tracking, billing, process tracking, and others.

Development of a reporting and mail merge/export system using Visual Basic as a front-end and MS SQL Server as the database engine.

Design and development of a complex, multi-screen system for exploring and calculating retirement alternatives related to tax-deferred annuities. Involved complex financial calculations and user-friendly interface and graphics.

Design and development of a Visual Basic system to import and analyze data related to credit-card marketing information.

## Experience

Veritas Economic Consulting, Cary, NC  
Software Developer/Analyst, 2007 to present

Cisys, Inc., Raleigh, NC  
System Developer, 2005 to 2007

Home In Touch, Inc., Raleigh, NC  
System Designer, 2003 to 2005

Cisys, Inc., Raleigh, NC  
System Administrator, 1999 to 2001

PersimmonIT, Inc., Research Triangle Park, NC  
Information Analyst, 1998 to 1999

Cisys, Inc., Raleigh, NC  
System Developer, Custom Information Systems, 1996 to 1998

Data General Corporation, Inc., Apex, NC  
Technician, 1991 to 1996

North Carolina State University, Raleigh, NC  
Technician, Hardware Services, 1989, 1990

Northern Telecom, Research Triangle Park, NC  
Junior System Analyst, 1984, 1985

## Areas of Specialization

### *Systems Design and Development*

- Design and development of Analytica model for estimation and comparison of the benefits and costs of alternative impingement and entrainment (IM&E) reduction options
- Design and development of Analytica models for national analysis of the economic and reliability impacts associated with a required closed-cycle cooling retrofit of existing once-through cooling systems
- Design and development of Analytica models for economic evaluation of commercial and recreational fishery impacts associated with current and future power plant operations

Software validation for a telephone data collection system for an ongoing pharmaceutical clinical trial. Designed and developed a system to maintain data for an ongoing pharmaceutical clinical trial. Accomplishments include:

- Developing and testing a database using Microsoft Access 2003
- Developing and testing different reports per user's request
- Importing data from legacy database into current database.

Created, implemented, and tested product designs for an embedded leak detection system (UL-approved). Accomplishments include:

- Programming and testing the embedded system using C-MAX software (ladder logic)
- Developing and testing different expansion modules for system
- Establishing the purchase of UL-approved components with numerous suppliers
- Designing and implementing manufacturing process of a turnkey system with a local fabricator
- Setting up a peer-to-peer network using Windows ICS.

Designed, developed, and integrated custom reports using Crystal Reports for UnifyIT, a web-based clinical trial management system. Performed analysis related to end-user custom reporting needs and customer data import/export requirements. Evaluated 3<sup>rd</sup> party reporting packages for integration into UnifyIT.

- Designed and developed reports for a major pharmaceutical customer per specification and integrated the reports into custom version of UnifyIT
- Modified software scripts to reflect database changes
- Performed bug fixes in UnifyIT's reports for a major product release.

Designed, developed, integrated, and trained custom software systems in environments, such as Visual Basic. Systems developed include scheduling, invoice tracking, billing, process tracking, and others. Performed hardware maintenance, network administration, server, and website administrations duties on a Microsoft NT 4.0 network. Accomplishments include:

- Developing a Reporting and mail merge/export system using VB 5.0 as a front-end and MS SQL Server as the database engine. Performed complete SQL Server system administration tasks, such as performance tuning, backups, security administration, etc. Developed OLE program for controlling Word to perform various mail merge and document management functions. Used RDO connectivity, OLE, stored procedures, triggers, and views.
- Co-developing a database-oriented website that uses Windows NT, Active Server Pages, Internet Information Server, along with VBScript, Microsoft SQL Server, and an ODBC connection. Involves Secure Sockets Layer programming, NT and SQL Server administration and security, extensive data conversion of Access and SQL Server uses BCP, and secure credit card transactions through Cybercash. Included complete installation, setup and administration of NT Server, SQL Server, IIS 4.0 (NT 4.0 Option Pack), and security certificates.
- Designing and developing a complex, multi-screen system for exploring and calculating retirement alternatives related to tax deferred annuities. Involved complex financial calculations and extremely user-friendly interface and graphics. Used VB 4.0 and Access 2.0 database. Provided reporting capabilities in Crystal Reports 5.0.
- Designing and developing VB 3.0 system to import and message data related to credit card marketing information. Used DDE to produce a highly complex report in Excel. Provided reporting capabilities in Crystal Reports 4.5.
- Designing VB 3.0 project to track and append marketing information for current customers, prospective customers, and consultants into an Access 2.0 database. Provided reporting capabilities in Crystal Reports 3.0.
- Installing Windows NT 4.0 LAN network using Microsoft Exchange and FACsys fax network.
- Installing Windows 95 LAN network using Meeting Maker.

### *Systems Analysis and Administration*

Performed hardware maintenance, network administration, server, and website administration duties on a Microsoft NT 4.0 network. Accomplishments include:

- Installing, upgrading, and maintaining network software applications, such as, Exchange 5.5, SQL 6.5/7.0, IIS 4.0, and Visual Source Safe 5.0
- Assisting programmers with troubleshooting errors encountered during development
- Troubleshooting and resolving compatibility issues with customers' software
- Purchasing and installing new software and hardware according to user's requirements.

Tested functionality of complex solid state printed circuit boards. Debugged to component level using data analyzers, oscilloscopes, and schematics. Solder certified on surface mount and through-hole devices.

Maintained and repaired computer hardware on standard PC and Macintosh platforms, including peripherals. Used diagnostic software and troubleshot to component level. Communicated to customer about cost and repairs.

Coordinated maintenance and repair of computer hardware for network of 50 users. Ordered, distributed, and installed new equipment for network. Received and transmitted data between regions. Filled open position when Senior System Analyst job became vacant.

### **Selected Report**

Kinnell, J.C., M.F. Bingham, C.M. Spagnardi, G.S. Crownfield, D.M. Woodard, and V.R. Satyan. 2008. *Estimation and Comparison of the Benefits and Costs of Alternative IM&E Reduction Options: Salem Harbor Generating Station*. Cary, NC: Veritas Economic Consulting.