Andrew Bateman | Software / Instrumentation / Electrical Engineer

E-mail: gomezbateman@yahoo.com   **GitHub:** github.com/AndrewJBateman
LinkedIn: linkedin.com/in/andrew-bateman

SUMMARY

- Full-Stack Developer with experience of programming, back-end web services & SQL / NoSQL databases
- Engineering Master's Degree & 20+ years' international project engineering/management experience working on a wide range of electrical, instrumentation & process control hardware / software
- Skilled at managing technical data & interacting productively with other disciplines & external vendors
- Experienced in supporting manufacturing production, maintenance & engineering modification projects
- Dedicated to ensuring data quality & constantly improving system/product efficiency & functionality
- Able to learn quickly and work autonomously, methodically & with a sense of urgency

SKILLS

Front-end: HTML5, CSS3/SASS, Bootstrap, jQuery, AJAX, JSON, YAML, GraphQL, JavaScript (ECMAScript 2015), Typescript, Angular, Angular Material Design, Reactive Extensions (RxJS), D3
Back-end: Node.js with Express middleware, RESTful APIs, microservices
Databases: SQL: MySQL, Postgres. NoSQL: MongoDB+Mongoose, mLAB, Firestore, AWS MongoDB Atlas
Mobile/Apps: Ionic-Angular with Apache Cordoba plugins. Progressive Web Apps (PWA)
Software Tools/Services: Visual Studio Code, npm, GitHub, Heroku, AWS Cloud 9, Postman, Atom, Glitch
Cloud: GCP application deployment & monitoring, Cloud Console, Command-Line Interface, GCP Firebase
Networks: Industrial Ethernet, including PROFINET, DeviceNet & Modbus TCP protocols. TCP/IP
Electrical/Safety Integrity Software: CompuTrace heat trace calculations, Febdok analysis of electrical installations, SmartPlant Electrical (SPEL) analysis of power distributions, ePlan Electric P8 & Bentley Microstation schematics design, PDMS, SISTEMA ISO 13849-1 machine safety evaluation
Instrumentation/Automation: sensors/analogue & digital gauges, RFID, bar-code readers, PLC/SCADA
Electrical/Electronic Hardware: AC/DC power distribution/control, analogue/digital signal & comms systems
Project Management Software: SAP, Proarc, Siemens Teamcentre
Languages: English native, French & Spanish spoken & written well, Norwegian spoken & written basic

EXPERIENCE

Software Engineering Self-Training: Home | 09/16 – Present
- Attained Udemy certificates in Angular, NodeJS, MEAN, Ionic & Machine Learning with TensorflowJS
- Created 200 GitHub repos, using a range of languages & stacks, including MERN, MEVN, PEVN & MEAN
- Successfully completed Coursera Google Cloud Products Certified Associate Cloud Engineer Training
- Studied software development, earning FreeCodeCamp Full Stack Developer Certification in dec. 2018
- Experienced with React library, Vue & Angular frameworks, incl. **Angular website 'andrewbateman.org'**

Senior Electrical Engineer: Aibel | Hammerfest & Stavanger, Norway | 10/12 – 08/16
- Created Electrical/Instrumentation/Fire & Gas work packages, Safety Reports & Engineering Studies for Maintenance & Modification contracts for North Sea oil platforms & LNG processing plant in Hammerfest
- Conducted field surveys in extreme arctic conditions & provided site support during planned shutdowns
- Promoted to Discipline Lead Engineer for an oil platform Living Quarters Upgrade Project, presented engineering modification proposals to client on-site & liaised with external manufacturers & suppliers
- Designed modifications to normal/UPS electrical distribution panels, switchgear & cabling, including safety assessments, work instructions in Norwegian & software-based electrical calculations/schematics
- Designed changes to pipe/valve heat tracing, normal/emergency lighting, HVAC, motor/valve control, earthing, cable/tube tray management systems, using ATEX design for hazardous areas
- Designed changes to P & IDs, instrumentation gauges, Distributed Control, Emergency Shutdown, Fire & Gas, Process Control, Safety & Automation Systems, pneumatics & control signal/communications cabling
- Managed extensive & detailed equipment data in the client's Life Cycle Information databases

Caregiver | Cared for family, including young disabled child. Studied Spanish & taught English | 08/11 – 09/12

Industrial Engineer: Bionet | Fuente Álamo, Spain | 04/09 – 07/11
- Designed power, safety control & process automation equipment, with variable frequency drives, Siemens S7 PLC & pressure, temperature, level, pH, conductivity/voltage sensor I/O & Ethernet/Modbus comms
- Assisted with in-house system manufacture/testing & created drawings using ePlan Electric P8
- Created technical documentation & translated company website from Spanish to English

Caregiver | Cared for family, including young disabled child. Studied Spanish & taught English | 08/08 – 03/09

Test Equipment Safety Engineer: Thales | Gatwick, England | 05/07 – 07/08
- Evaluated microwave radar test equipment to industry safety norms, documenting findings in safety reports
- Designed modifications to test equipment & created calibration, hardware & software test documents
- Successfully managed hardware/document changes using Siemens Product Lifecycle Management software

CES Electrical Engineer: Applied Materials | Horsham, England | 02/00 – 05/07
- Designed a wide range of projects for manufacture & integration into ion implanters to meet tight production deadlines & satisfy European/US industry standards, including CE, SEMI, UL, CSA & NFPA
- Created electronic equipment for the implanter wafer handling robotic interface, including a factory automation PC, RFID bar code readers, status signal light towers & an infrared light curtain
- Designed data communications systems with many types of network cabling & interfaces/protocols
- Managed engineering projects from client specification to vendor manufacture, integration into ion implanters in the UK production facility & support for installation on customer sites worldwide
- Liaised with customers, external manufacturers/vendors & assisted with production build & testing
- Supported the Sales Department with detailed technical quotations of ion implanter customisation projects
- Created full manufacturing data & documentation including test, safety, quality & maintenance procedures
- Improved quality of implanter system designs using Engineering Change Orders & Oracle database

Engineering Services Manager: Saft Power Systems | Hainault, England | 07/98 – 01/00
- Designed banks of UPS cabinets with AC/DC power distribution, batteries & control/communications units
- Supported the Sales Department with technical quotations of Telecoms UPS systems & power equipment
- Assigned Project Manager for large Air Traffic Control contract for UPS systems manufactured in-house, liaising with other departments & meeting with the client on-site
- Gained valuable nuts & bolts experience on the production line & as an authorised System Test Engineer
- Translated documentation from French to English & liaised with other branches of the company in France
- Created test specifications, user manuals, quality & reliability documentation

Senior Design Engineer: Silvertech | Horsham, England | 12/95 – 06/98
- Supported the Sales Department with technical quotations of GE Fanuc & Allen-Bradley Programmable Logic Controller/Supervisory Control & Data Acquisition (PLC/SCADA) systems
- Designed Process Control, Fire & Gas and Emergency Shutdown system hardware, gaining valuable project engineering experience from kick-off meeting to design, construction, test, customer FAT & commissioning
- Created detailed drawings of power distribution, PLC control cabinet, communications & wiring layouts
- Created hardware, software & system integration test specifications and CE-marking documentation

Sales Office Assistant (Temporary): Fuji Electric | Nutfield, England | 08 – 11/95
- Administered European sales of pressure, level, temperature & flow transmitters
- Provided French-speaking support for French manufacturer

Account Manager: Clecom | Birmingham, England | 04 – 07/95
- Managed sales of mathematical, scientific & data-acquisition software in the UK & Europe
- Provided French-speaking support & worked in the Clecom branch in Paris, France

Jobseeker | 02 – 03/95

Sales Engineer: Feedback Instruments | Crowborough, England | 06/94 – 02/95
- Provided technical support for UK & international sales of educational engineering & test equipment
- Coordinated projects with the engineering & production departments and with sales offices worldwide

Temporary Work | 10/93 – 06/94 | Production line assembly, office data-entry & distribution warehouse work

EDUCATION
- **MSc Electronic Engineering, Cardiff College, University of Wales, 1993**
  -Dissertation: '*Research into the Surface Potentials across a Silicon-On-Insulator Transistor*' completed in Louvain La Neuve Univ. Microelectronics Laboratory, Belgium
- **BEng (Hons) Electronic & Electrical Eng. King's College, Univ. of London, 1992**
  -Final year project on 16-level Quadrature Amplitude Modulation (16-QAM) digital modulation.
  -Erasmus exchange year with ISEN engineering school in Lille, France.
  -Engineering work experience with GEC Avionics, Ministry of Defence, City Technology & Thorn EMI.