Chase J. Brignac
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WORK EXPERIENCE

Systems Engineer II   August 2016-Present
Northrop Grumman Mission Systems CyberIntelligence group in Rancho Bernardo, MD
- Integration software testing team lead familiar with Scaled Agile Framework
- Responsible for launching continuous integration and Python powered automated testing to fix software problems early and often
- Accountable for introducing and implementing scripts that setup our drone software to run in the developers environment, improving software setup time over one hundred fold
- Release manager introducing and implementing automated integration testing, software data integrity, nightly builds, and reducing build time from over a week to less than a day
- Product co-owner on our five teams of eight developers each

Systems Engineer   September 2015-Present
NASA Goddard Space Flight Center Earth Science Mission Operations Code 428 in Greenbelt, MD
- Improved spacecraft DevOps scripts in an agile dev environment to ensure 100% uptime
- Achieved 100% data capture rate, error free operation, and superb troubleshooting of Landsat 8
- Earned Satellite Console Controller and Satellite Operations Controller certifications

Co-Founder and Chief Technology Officer   October 2015-March 2016
WeCook in College Park, MD
- WeCook provides personal chefs to cook all of a customers meals on request via a web app
- Directed DevOps team that successfully built and maintained using agile development practices on Amazon Web Services EC2 a website to regularly auto bill users, permit editing of chef appointments, and enable Chief Operating Officer to manage hundreds of appointments efficiently
- Created operations software which increased time efficiency over 40x and increased accuracy 10x
- Attained revenue growth from hundreds monthly in October to $10k monthly in February
- Enabled profit margins of 10-30% on bulk food chef appointments

Test Engineer   April 2014-September 2015
NASA Goddard Space Flight Center Planetary Environments Laboratory Code 699 in Greenbelt, MD
- Contributed to testing Martian satellite MAVEN, and Martian rovers Curiosity and ExoMars
- Calibrated, operated, and provided analysis from the MAVEN Neutral Gas Ion Mass Spectrometer (NGIMS) testbed and instrument, yielding useful science products
- Created Python scripts that trend MAVEN NGIMS testbed data and instrument sensitivity
- Improved usability of MAVEN and Curisoity data web portal called XINA online in AngularJS

Research Assistant   Summer 2012 and 2013
National Institute of Standards and Technology (NIST) in Gaithersburg, MD
- Developed simulations in Python of an efficient single photon source in the lab called the Number Squeezed State Generator (NSSG) by using Spontaneous Parametric Down Conversion (SPDC) with system feedback to achieve super-resolution and supersensitivity
- Built Maximum-Likelihood Estimation (MLE) fitting program in Mathematica and Java
- Constructed Modified Levenberg-Marquardt Algorithm (MLMA) fitting program in MATLAB
- Wrote Monte Carlo simulations in C++ and Java of Fabry-Perot interferometers with various methods of intensity detection and various quantum states of light input to study sensitivity, visibility, and other characteristics
- Engineered Arduino based temperature controller and GUI to maintain a set-point within 0.05 C of any temp in the range 20 C to 150 C using C++ and Agile principles

Research Assistant   August 2010 - May 2013
Quantum Science and Technology Group in Baton Rouge, LA
under the supervision of Dr. Jonathan P. Dowling
- Programmed simulations in Mathematica and MATLAB of Mach-Zehnder interferometers with parity detection and various quantum states of light input
- Developed a GUI to run these simulations for a more interactive method to study sensitivity, visibility, and other characteristics

CLEARANCES

Full DoD Secret Clearance   *February 2017-Present*

- COMSEC and CRYPTO briefings

SKILLS

Programming and Software

- Languages: Python, C++, Java, JavaScript, Mathematica, LaTeX, MATLAB, Bash
- Libraries: matplotlib, NumPy, SciPy, SymPy, jQuery, SikuliX, OpenCV Computer Vision API
- Frameworks: Meteor, Bootstrap, AngularJS
- Operating Systems: Mac OS X, Ubuntu, Red Hat, Windows
- Version Control: Git, SVN, ClearCase
- Other: Jenkins, Amazon Web Services (AWS) EC2, VMWare Workstation Pro, Docker

EDUCATION

Louisiana State University, Baton Rouge, LA   *May 2013*

- Bachelor of Science in Physics with a Minor in Mathematics, 3.36 GPA

PUBLICATIONS

Strategies for choosing path-entangled number states for optimal robust quantum optical metrology in the presence of loss   *July 2012*

- Published in Physical Review A, by the American Physical Society
- Kebei Jiang, Chase J. Brignac, Moochan B. Kim, Hwang Lee, J. P. Dowling
- Research performed at Louisiana State University on quantum optical metrology using parity detection applied to path entangled Fock states in lossy environments
- Phys. Rev. A 86, 013826 (2012)

HONORS & AWARDS

Google Talk   *April 2016*

- Presented Landsat 8 DevOps practices at Google's data center in Lenoir, North Carolina

Landsat 8 Flight Operation Team Excellence Award   *February 2016*

- For significant contributions to safeguarding the Landsat 8 mission

Pitch Dingman   *February 2016*

- Won 2016 Pitch Dingman Competition grand prize of $15,000 for WeCook

LEADERSHIP

Co-Executive Director, Bitcamp Hackathon   *2015 - 2016*

- Facilitated diversity, innovation, and creativity to make new technologies
- Managed over a dozen directors for a hackathon with over twelve hundred participants
- Balanced quarter million dollar budget

Advisor, Startup Shell   *2015 - Present*

- Mentor incubating startups & fostering entrepreneurship