

Brian "Beej" Hall

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EDUCATION

Master of Science in Computer Science, 1997

California State University, Chico

Graduated with distinction

Bachelor of Science in Computer Science, 1996

California State University, Chico

Minor in Mathematics

TEACHING EXPERIENCE

Computer Science Instruction, Curriculum Development

Independent Contractor, Jorgensen Labs LLC, October 2021-Present

Developed curriculum for Bloom Institute of Technology to take students from basic data structures to solving interview-style junior-level whiteboard challenges. Emphasis on problem-solving techniques and growth mindset using Python, JavaScript, and Java.

Director of Computer Science Instruction

Lambda, Inc., 2017-2021

Led a team of remote instructors teaching computer science topics, built curriculum, and set the high-level direction of the computer science program. Tuned the program to have an emphasis on solving difficult problems, improving learning ability and interview skills, and developing practical expertise for the workplace.

Adjunct Faculty, Computer Science Department

Oregon State University-Cascades, Fall 2016, Winter 2022

Taught Computer Architecture and Assembly Language, and Operating Systems. Simultaneously instructed local and remote during COVID.

Continuing Education Instructor

Central Oregon Community College, Fall 2016, Spring 2017

Designed and instructed a bootcamp-style C++ course, teaching students basic and intermediate C++ and object-oriented programming techniques. Also taught a "Programming for Non-Programmers" one-night course.

INDUSTRY EXPERIENCE

Cofounder/CTO

Decibel Advertising, 2015-2017

Developed web applications to control advertising purchases based on external, relevant events. Implemented RESTful APIs for backend services. Interfaced with Facebook's advertising system.

Cofounder, CTO

Robot Stampede, 2008-2017

Web marketing production using HTML/CSS/JS, mobile development. Built an extensive in-house framework for efficient application build-outs with an emphasis on rendering quality. Managed contractors and interns, and provided project oversight and technical investigation.

Senior Software Engineer

Independent Contractor, 2006-2008

Implemented several projects for Adidas in Flash/ActionScript, including maintenance to the Adidas Women clothing site, Dale Earnhardt Jr. Pit Crew game, and an artistic application for the Adidas Originals campaign. Also worked as a computer science tutor in algorithms and data structures.

Software Engineer

Activision / Z-AXIS, 2002-2006

Modified particle system exporter in tools chain, implemented basic physics collision resolution, authored various camera behaviors, developed character control and melee combat systems, managed player physics, assisted with Havok physics engine integration, worked extensively with 3D math. Shipped games: BMX XXX, X-Men III.

Senior Software Engineer

Freestyle Interactive, 1998-2002

Created interactive Java advertising and multiplayer games for award-winning agency. Emphasis on high speed lightweight code, producing efficient real-time rendered graphics. Implemented the online multiplayer Java games for Sony's Station.com. Co-designed and authored a massively multiplayer infrastructure in C and Java. Developed Palm OS games and applications, as well as custom libraries for fast blitting and infrared communication. Clients included Microsoft, Sun, Intel, New Line Cinema, CBS MarketWatch, Showtime, and CocaCola.

Intern, then Software Engineer

Hewlett Packard, 1995-1998

Built software for application response analysis in C for HP's OpenView division. Investigated and implemented techniques for noninvasive user application monitoring. Updated and improved APIs for accessing HP's employee database. Reengineered 4GL UIs that access calling card, cellular, and modem usage databases. Developed software to track ISDN usage for user billing. Designed web interfaces for accessing report data online.

Software Engineer

Node8 Web Services, 1995-1996

Designed and co-implemented a web based ordering system for an online CD store, including customer front end and database integration. Also developed administrative tools for managing music and sales databases.

Intern Software Developer

Castle Rock Computing, 1994-1995

Implemented several TCP/IP Windows utilities using WINSOCK, including telnet, TFTP, and BOOTP. Developed a WINSOCK library using a lower-level network API.

Computer Operator, Lab Assistant

De Anza College, 1991-1993

Changed mountains of backup tapes, including reel-to-reel tapes, managed endless print jobs, stayed awake for entire graveyard shifts playing games on a MicroVAX II. As a lab assistant, helped students through their assignments, both with programming and IT-related problems.

PROJECTS AND INTERESTS

Beej's Guides

Authored an ongoing series of popular free tutorials and books dealing primarily with Unix network and system programming, and Python and C programming.

Tech Blog

Wrote a continuing set of articles dealing with beginning-to-intermediate programming issues, including emerging technologies, languages, algorithms, and mathematics. Interactive applications are presented within the articles to promote clear presentation of the material in an engaging manner.

Bend Hackers Guild

Organized and ran the Bend Hackers Guild, a local meet-up for software enthusiasts and geeks. Presented multiple topics at monthly gatherings (postponed for COVID).