Keysight Interview Prep: 10-Day Plan

Start Date: August 30, 2025 | **Focus:** C++ Simulation Software Dev

Summary of Previous Prep

7-day plan covered C++/OOP/DSA/OS basics, live coding/debugging mocks, behavioral ties to AVL/Persystems. General questions: OOP pillars, virtual functions, BST balance, process vs. thread. Job-specific: Qt signals, physics integration, AI in PathWave. Refactored to 10 days with Keysight simulation emphasis (PathWave features: ADS for RF/EM sim, cloud HPC, PDKs for automotive/5G/quantum, interoperability).

10-Day Plan

Aim: 2-3 hrs/day. Add PathWave study (features, tools like ADS/RFPro), sim coding practice (e.g., basic physics models in C++). Use LeetCode/HackerRank for coding; review Keysight interviews (array rotation, 2nd largest, C++ scopes).

1. **Day 1: Aug 30 (Basics & Assessment)**
   Review C++ fundamentals, OOP. Self-assess: Code 2 easy problems. Read PathWave overview (ADS for EM sim). Tie to resume sim projects.

2. **Day 2: Aug 31 (OOP & DSA)**
   OOP inheritance/polymorphism; DSA arrays/trees (BST balance). Practice 3 medium problems. Study PathWave automotive sim (radar models).

3. **Day 3: Sep 1 (C++ Advanced & Qt)**
   Smart pointers/STL; Qt signals/slots. Code GUI sim element. Explore PathWave 5G features (NR models, MIMO).

4. **Day 4: Sep 2 (OS & Bit-Level)**
   Threads/semaphores; bit ops/teasers. 3 DSA problems. Review PathWave quantum sim (EM analysis).

5. **Day 5: Sep 3 (Live Coding & Debug)**
   Mock 30-min call: 2 problems, debug. Practice sim debug (e.g., memory in EM model). PathWave cloud sim integration.

6. **Day 6: Sep 4 (Mixed Review & Sim Focus)**
   Mix OOP/DSA/OS. Code basic physics sim (e.g., component model). Study PDKs/interoperability for C++ dev.

7. **Day 7: Sep 5 (Behavioral & Keysight Tie-Ins)**
   Refine intro/answers with sim emphasis. Practice "Why Keysight?" (PathWave alignment). Review interview questions (array rotate, C++ scopes).

8. **Day 8: Sep 6 (Advanced Sim Practice)**
   Implement sim task (e.g., node connect in Qt for e-drive). Explore Keysight tools (RFPro/SIPro). 2-3 problems.

9. **Day 9: Sep 7 (Full Mocks & Debug)**
   Full mock: Coding, debug sim code. Analyze complexities. PathWave ecosystem partners.

10. **Day 10: Sep 8 (Polish & Rest)**
    Light review all. Verbalize sim explanations. Prep questions for them (team sim workflows).

Added Sim Elements

- Daily PathWave study: Features (multi-domain, cloud, PDKs). - Practice: Code sim models (physics integration, Qt UIs). - Keysight-Specific Questions: Array rotation, 2nd largest, C++ private access, scopes, virtual destructors.